Jan20'49F
UNIVERSITY OF MINNESOTA
RECEIVED
JAN
19
1949
LIBRARY

# Virginia MEDICAL MONTHLY

OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

## CONTENTS

Guest Editorial. Walter B. Martin, M.D. ---- 1

Cancer in General Practice. Edwin P. Lehman, M.D., Charlottesville, Va. ---- 3

Benign Nonspecific Neoplasms of the Gastro-Intestinal Tract. J. L. Smoot, M.D., and D. W. Scott, Jr., M.D., Fredericksburg, Va. ---- 8

Hemorrhagic Diseases; Classification, Diagnosis and Treatment. Howard P. Holt, M.D., and Byrd S. Leavell, M.D., Charlottesville, Va. ---- 13

The Successful Treatment of Gold Dermatitis with British Anti-Lewisite: A Case Report. Lloyd F. Moss, M.D., and Elam C. Toone, Jr., M.D., Richmond, Va. ---- 23

Small Bowel Tumors. Richard E. Bower, M.D., and George D. Vermilya, M.D., F.A.C.S., Richlands, Va. ---- 27

Unicameral Cyst of the Calcaneus. Robert G. Dunn, Jr., M.D., Richmond, Va. ---- 30

Cyanosis in Infants from Polluted Well Water. Edwin A. Harper, M.D., Lynchburg, Va. ---- 32

A Case of Pregnancy Complicated by a Uterus Didelphys. Gordon W. Jones, M.D., Fredericksburg, Va. ---- 35

What Are The Movies Doing to Our Young People? E. P. Tompkins, M.D., Lexington, Va. ---- 37

Continued on page 6.

V. 76

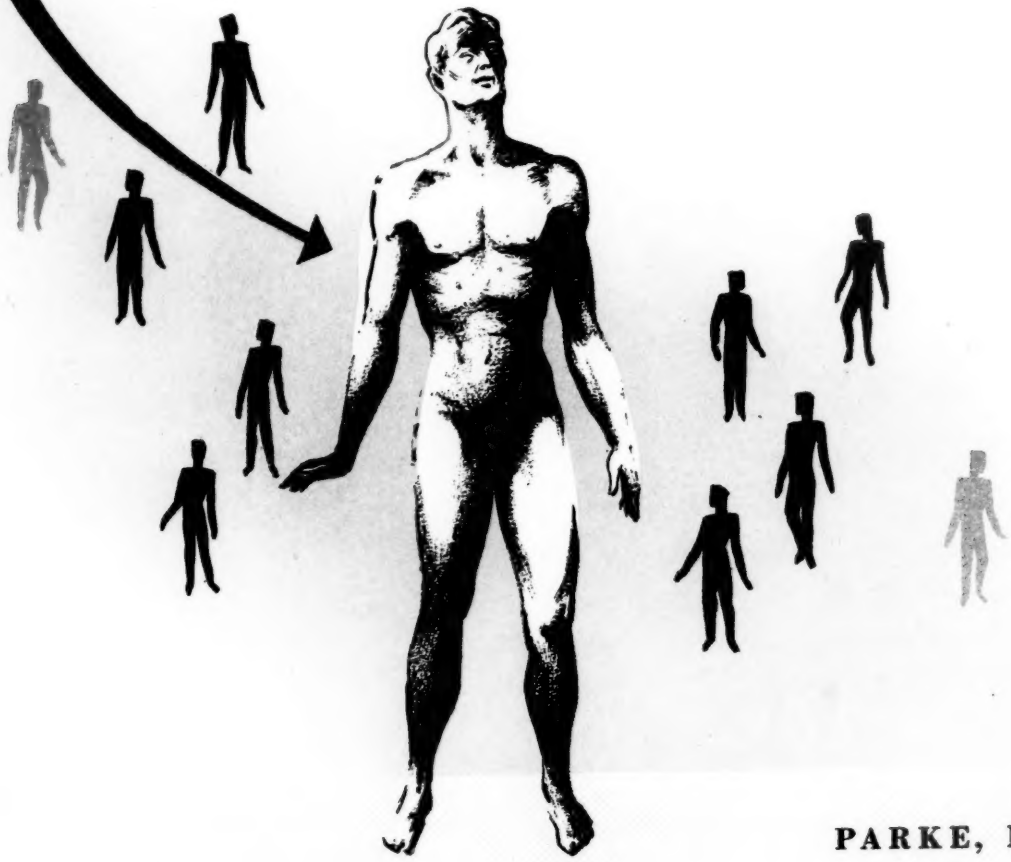
HAPPY NEW YEAR!

*January, 1949* - Dec

XUM

# criteria in syphilotherapy

# MAPHARSEN



PARKE, DAV

SGMS
LVVI

# Virginia Medical Monthly

Vol. 76, No. 1
WHOLE No. 1159

RICHMOND, VA., JANUARY, 1949

$2.00 A YEAR
25 CENTS A COPY

## GUEST EDITORIAL

### Local Responsibility or Federal Control of Medicine

ONE of the results of the recent national election has been to stimulate and encourage the advocates of a system of Federal control of medicine through national compulsory sickness insurance. There is no doubt that some version of the Wagner-Murray-Dingell Bill of the last Congress will be introduced in the next session. However it may be modified in detail, the basic principles of compulsion, wage deduction and Federal control will remain. Such a bill will receive powerful support. Much of this support will come from individuals and groups of good intent who believe that some action is necessary if the benefits of modern medicine are to reach the people as a whole.

The demand for a wider distribution of medical care and of methods for financing the cost are reasonable and should be met, providing these objectives can be accomplished without diluting the quality of medicine or inhibiting the continued advance of the science of medicine. The progress of medicine during the past half century has been outstanding. The benefits that have accrued to the people of this country are evidenced by an increase in life expectancy during the period of 1900 to 1947, from 49 to 67 years. During this same period of time there has been a striking reduction in the mortality rate of many diseases. For example, typhoid fever has fallen from 28.8 per 100,000 people, to .6; diphtheria, from 32.8 to 1; and acute diarrhoea, from 116 to 9. The quality of medical care now received by the people of the United States is better, and the quantity greater than that ever received by the people of any great nation. This has been the accomplishment of a system of free medicine. Such a system should not be put in jeopardy without convincing proof that the substitute offered is capable of producing even greater benefit to the people.

Physicians have no vested rights in medicine, but by reason of their training they are capable of judging the quality of medicine and of evaluating the components of good medicine. It is therefore not only proper but it is our duty to place the facts before the people. We believe that the Federal control of medicine will depreciate the quality of medical care received by the American people. We have ample reason to fear that it will impede the progress of the science of medicine. We believe that the cost of medical care can be financed on a voluntary pre-payment basis. Already over forty-three million Americans are covered by pre-payment hospital or sickness medical care plans. We believe that this is the American way, and is in keeping with the principles of free enterprise. We believe that facilities can be improved and extended without giving control to the Federal Government. We believe that local control in health matters is just as important as local autonomy in the political fields. We believe that the destruction of free medicine will lead to progressive destruction of free enterprise in other professions, and in industry.

The House of Delegates of the American Medical Association has levied an assessment of $25.00 on each of its members, the fund so accumulated to be used in presenting the facts to the American people. They should know the facts, and it is the

1322926

XUM

duty of every physician to lend his individual support to the accomplishment of this end. It is also their duty, through the local societies and state associations, to aid effectively in implementing the constructive program of the American Medical Association. This is no time for either hysteria or defeatism. We have faith in the American people. We believe that, if they are correctly informed, their judgment will be sound.

WALTER B. MARTIN, M. D.
*521 Wainwright Building,*
*Norfolk, Virginia.*

---

EDITOR'S NOTE. Dr. Martin, a former president of the Medical Society of Virginia, is a member of the Board of Trustees of the American Medical Association and has been named a member of the Planning Committee for the campaign being inaugurated by the Association.

---

**Frisco Doctor Presents His Own Program.**

In this day and age when everybody is talking himself hoarse about medical plans and programs, Dr. Anthony B. Diepenbrock of San Francisco comes up with his own 13-point health program which, he says, "might be interesting to our colleagues":

1. Continue to sit on your fat derriere and do nothing.

2. Be apathetic and, like 5,000,000 registered Republican voters who failed to vote, do not bother to make your opinion known. If you think, as they did, that your opinion or your vote is not worth anything, the opposition will agree with you and act accordingly, as they have.

3. Write an occasional letter to your congressman, tell him off, and then explain proudly to the interns in the surgical dressing rooms how smart you are and what a stinker your congressman is.

4. Tell everybody you see that the gag is up, and we might as well prepare for the inevitable.

5. Moan and groan and issue explosive and unprintable epithets.

6. Refer to your medical leadership as a group of impotent, ineffective and bumbling ignoramuses.

7. Make speeches before sympathetic lay audiences, and convert those who already believe in free enterprise.

8. Don't bother to tell your county society heads, your state society heads, or your national association heads what you want them to do. Expect them to find a way for you without your guidance.

9. Scream about high medical society dues and forget that our friends in the trades unions demand many times what we pay: in other words, make the situation as difficult as possible, then grumble about it.

10. Oppose any program developed by the majority of your colleagues because it demonstrates your superior wit and your general greatness.

11. Remain superbly and learnedly dignified when Joe Doakes asks why you oppose state medicine. Brush him aside with any insult you can think of. Joe will like you for that.

12. Don't bother to use the selling methods which actually bring messages before the public. Continue to depend on occasional radio feature programs. Billboard advertising, newspaper advertising, national magazine advertising, radio advertising and above all, continuous and daily radio spot programs over national hookups and all such like are too commercial, too troublesome, too expensive and too undignified: don't use them.

13. Above all, disregard the "little guy"—the one with a vote. Tell him nothing; push him around. He doesn't know anything anyhow.

*(Secretary's Letter, A.M.A.)*

# CANCER IN GENERAL PRACTICE*

EDWIN P. LEHMAN, M.D.,
University of Virginia,
Charlottesville, Virginia.

Whatever knowledge about cancer the research of tomorrow may bring us, we have today a body of knowledge the immediate complete application of which would modify the picture of cancer control almost overnight. The chief element in this body of knowledge is the single fact that the great majority of cancers could be cured if the growth were removed or destroyed in its earliest stages. There are, of course, two main reasons why all cancers are not so treated. The first, and at present the less adaptable to improved practice, resides in the nature of certain cancers, particularly those not on or near the surface of the body. As a class these tumors present now an insoluble problem, since so many produce no symptoms in the early stages and fail to disturb either patient or physician until they are beyond hope of cure. The second reason is the failure either on the part of the patient or on the part of the physician to suspect possible cancer when symptoms occur. This discussion is concerned with the role of the physician in cancer diagnosis and particularly with that of the first physician to see the complaining patient.

If all patients came promptly to their doctors, and if all doctors demanded complete diagnosis of any lesion which might remotely be cancer, the large group of malignant tumors which are susceptible to early diagnosis could be largely eliminated from the death rolls of the disease. The part played by the patient is primary, a fact long recognized among those interested in cancer control. The lay education program, now in its fourth decade, of the American Cancer Society, formerly the American Society for the Control of Cancer, has had a measurable effect, to be illustrated later, on the alertness of the public to the disease.

The questions may then be asked, what the family doctor is doing to improve his share in the diagnosis of cancer and whether he is becoming alert to the disease at a pace consistent with the growth of public awareness. It is unquestionably true that many individual doctors, perhaps the majority of doctors, are fully alert to the menace of cancer in their daily practices. Exceptions to this generalization, however, are so numerous and so disastrous that one cannot conclude that the body of physicians as a whole is doing a proper job. Those who work in centers devoted to the diagnosis and treatment of cancer deal almost daily with patients in advanced stages of the disease whose plight is entirely the responsibility of the doctor whom they first consulted. It is easy to cite examples without much searching of memory. For months an elderly man was given antiluetic treatment without biopsy for a cancer of the lip which gradually grew until it was beyond either surgical or radiological aid. A lay volunteer worker for the Virginia Division of the American Cancer Society developed a cancer in her breast, discovered as a painless mass. She knew enough to seek immediate advice. Her doctor, an old family friend, laughed lightly and told her not to worry about it. An aged patient found a mass in his abdomen and reported it promptly to his doctor, whose answer was that there was nothing to worry about. Six months later inoperable cancer of the stomach was diagnosed. These are but examples of many others.

Every study that has been made of the causes for delay in the treatment of cancer shows a considerable proportion of cases in which the doctor at least shares the responsibility. In a study at the New Haven Hospital and Tumor Clinic[1] this proportion was 45.2%. At the Memorial Hospital in New York two studies were carried out at an interval of eight years. Pack and Gallo, in 1938,[2] found that there was no delay in the treatment of cancer, a classification including all patients treated within a month of the first symptoms, in 20.7% of 1000 cases. Luck and Robbins, in 1946,[3] found no delay in 29.4% of 500 cases, a significant improvement of nearly nine per cent in the promptness of treatment of cancer during the intervening eight years. Comparison of the factors responsible for delay in the remaining cases showed in the earlier study that the physician was wholly responsible in 17% of the total number of cases and in

*Presented at the Symposium on Malignant Growths, Department of Continuation Education, Medical College of Virginia, March 24, 1948.

the later study in 27.8%. This apparent increasing culpability of the physician was accompanied by an improvement in the patients' behavior from a figure of 44.3% of cases in which the patient was entirely responsible for the delay in the earlier study to 32.0% in the later study. A group in each study in which delay was due both to the patient and the physician need not be presented here. These figures suggest that the physician, rather than improving his index of suspicion of cancer, is relatively losing ground. The improvement in the patients' behavior accounts entirely for the increased number of cases which were treated without delay. It would appear, therefore, that the lay education campaign is effective and that lay knowledge has outrun the knowledge of the physicians from whom patients seek help. It is the universal conviction of all physicians intensively concerned with the treatment of cancer that this is a fact. The urgent problem, then, is how to improve practice so that every patient who seeks help can be given the proper advice and brought to early diagnosis and early treatment; in short, how to ensure full use of the not inconsiderable knowledge of the disease that we possess today.

It will perhaps be useful to seek the reasons for this unfortunate dereliction of the profession as a whole. There are certain obvious factors that can be described. In the first place, there is no doubt that, in the past, medical schools and the authors of textbooks have failed to present cancer to successive generations of medical students in an effective way, effective from the point of view of early diagnosis. Too often cancer is demonstrated to students and described in textbooks only in its late and hopeless stages. Few medical students have graduated without having repeatedly heard, or read in a text the description of orange-peel skin as a sign of cancer of the breast, and without having such a lesion demonstrated. No one would deny that orange-peel skin is such a sign, but teaching is utterly inadequate unless it also points out that orange-peel skin is a late sign and that a patient who presents it is almost certainly beyond the hope of cure. Unquestionably many physicians wait to watch a lump in the breast until this sign or other unmistakable appearances make the diagnosis for him. As a sweeping generalization, subject to exceptions, it can be said that cancer which is obviously cancer on physical examination has almost certainly reached a stage in which hope of cure is slight. Fortunately this approach to cancer in medical education has been recognized as fallacious. No graduate of the last decade or so should fall into this trap.

The second important factor resulting in missed diagnoses of cancer is the failure to perform adequate examinations, a fault of which all of us are at least occasionally guilty. The results are often striking to the physician in the cancer center. Cases are seen of advanced cancer of the rectum within easy reach of the finger in which the finger had never been used. It is deplorable that cases are encountered in which hemorrhoidectomy has been performed when the lesion is just an inch or so above the level of the operative field. Many physicians do not use the speculum in a pelvic examination. There is no reason why every patient who comes into a doctor's office should not have the benefit of a digital rectal examination and an inspection of the nose, the buccal mucosa, the tongue, and the pharynx. In addition, all women should have a careful inspection of the cervix as well as bi-manual palpation of the pelvic organs. None of these examinations require prolonged technical training and the abnormal is usually not difficult to recognize. It is not to be presumed that all physicians who make these examinations will be able to diagnose cancer. They can, however, uncover an abnormality and are then in a position to refer the patient to a specialist for the actual diagnosis. The use of the proctoscope requires some technical skill and has special dangers. It is a skill, however, that is easily acquired by practice and that will save patients when they would otherwise be lost. With careful use the danger is minimal.

A striking contrast has been afforded recently at the University of Virgina Hospital in two cases of carcinoma of the rectum. The first patient, complaining of rectal bleeding, had had digital examination and a barium enema. A few sigmoid diverticula were discovered by the x-ray, and it was unfortunately assumed that they explained the bleeding. It must be remembered that x-ray of the large bowel usually yields no information about the rectum. A proctoscopic examination was not done. Six months later proctoscopic examination revealed a cancer of the rectum, then inoperable, just above the limit of digital examination. Unquestionably it was present six months previously and almost unquestionably it could have been cured

if the physician had completed an adequate examination. A pleasant contrast is presented by the second patient, who also complained of bleeding from the rectum. He was seen by a practitioner in a rural Virginia town, who immediately referred him to another physician familiar with proctoscopic examination. This doctor found a cancer of the rectum ten inches above the anus and immediately put him in the hands of a surgeon. An extremely early lesion was found, thoroughly operable, and with an excellent prognosis. A proctoscope belongs in every practicing physician's office just as truly as does a vaginal speculum. He may not be able to diagnose all lesions, but, again, within the reach of the proctoscope, he can detect abnormal findings.

This matter of adequate general examination brings up the now much discussed problem of the cancer detection center. There is not time for a complete analysis of its place in medical practice. Let us consider briefly two or three points. The medical profession for many years has urged periodic physical examination. It took the menace of cancer to impress on the lay world the desirability of this program. Cancer detection centers have been largely developed, therefore, through lay pressure. It must be noted that the yield in cancer diagnosis has been low, but the yield in non-malignant diagnoses has been relatively high. The cancer detection center has, in fact, made new patients for doctors rather than has robbed them of their practices. The program of cancer detection centers can be considered self-limited. There are not enough doctors available in the country to make possible a program which would give every individual in middle life and later two examinations a year. Perhaps the most important function of the growth of detection centers has been to demonstrate to the profession itself the need for complete periodic examinations. In the past all doctors have not performed this task adequately among their own clienteles. The true detection center is the doctor's office. It is hoped that in time the need for detection centers will disappear with the growing realization of the physician that it is his personal job. Any physician who on a thorough physical examination finds an unsymptomatic lesion which turns out to be cancer has a thrilling experience. He has given his patient a chance for life which might otherwise have been lost, simply by the conscientiousness with which he accepts the responsibility that the patient gives him by coming for examination. These considerations re-emphasize the place that the doctor has in the control of cancer in its early stages.

The third great reason why cancer is so often missed by the practicing physician is the fact that it is a relatively rare disease in family practice. Although it is quantitatively the second cause of death, and although in the surgical services of general hospitals it may run as high as 50% of diseases treated, it is not a common condition for which patients seek advice. It has been said that 90% of all disease that comes to the physician does not need his services, that is, that it is either trivial or self-limited. The remaining 10% present the problems in which the physician's action may determine the outcome: and only a relatively small proportion of these cases are malignant tumors. Statistics on the number of cases of cancer seen in general practice are difficult to obtain. One practitioner in Virginia who was alert to cancer reported two cases of malignant tumor in some 750 new cases seen by him in the course of a year. The closest possible estimate of the total number of new cases occurring each year, an estimate frankly based on inadequate data, suggests that the average practitioner sees about three previously undiagnosed cancers a year.

Since physicians not in special practice see cancer so infrequently, it is no wonder that much of their schoolday knowledge of the disease has grown rusty and that they are tempted not to include reading about cancer in their reading on more frequently observed diseases, reading that they must undertake in order to maintain their knowledge at current levels. This is a situation difficult to solve. The series of articles on cancer now appearing in the *Journal of the American Medical Association,* which were fostered by the American Cancer Society, is an attempt to present in brief form in a readily accessible publication modern facts about cancer. Every doctor should put them on his required reading list.

Another reason for physician error has a psychological basis. The doctor's practice depends on many factors, one of which is the emotional response which he inspires in his patients. He knows the emotional overlay of all disease. He knows that suffering can be diminished or in some cases even abolished by reassurance, which is one of the chief weapons in his armamentarium. His patients are often old friends who look to him for emotional

XUM

support as well as physical aid. He cannot afford for the sake either of his patients or of himself to develop a reputation as an alarmist. Furthermore, he wants to spare his patients the expense of unnecessary special study. As a result of these factors it is almost inevitable that his approach to complaints will tend to be optimistic unless the condition is obviously serious on first examination. Many cancers come late for treatment because of this wholly natural but at times disastrous psychological reaction on the part of the doctor.

Finally, one reason why cancer is often missed is the absence of any simple test which would reveal its presence. Too often diagnosis requires expensive radiological study, endoscopic examination, or surgical operation. If it were possible to suspect the presence of cancer on the basis of a test comparable to the tests which enable the physician to suspect the presence of syphilis, much difficulty would disappear. Extensive research is being carried forward along this line, and there are already preliminary studies which suggest promise for the future. It is important for us to know as physicians that none of these are of proven clinical value today in spite of the unfortunate lay publicity that has been given to them.

Having briefly outlined a field in which physician action seems to fall deplorably short of the possibilities for aid to patients that modern medicine should offer, and having partially analyzed the causes for physician failure, we are, perhaps, in a position to suggest ways in which the doctor's behavior can be improved. In the first place, the primary need is alertness to cancer on the part of every practicing physician, no matter how seldom he sees the disease. Whatever the complaint, he must ask himself the question: Can this be cancer? This audience is interested in the problems that cancer presents or it would not be here. It seems therefore superfluous for me to point out that alertness of the physician to the danger signals which have been taught to the lay public as symptoms demanding a physician's attention is fundamental. If we spread abroad the information that unexplained bleeding from body orifices, that any lumps, that chronic cough, that changes in size and appearance of moles and warts, that recent alterations in bowel habits, that unexplained loss of weight, that difficulty in swallowing, that prolonged hoarseness, that failure of ulcers on the skin to heal, that persistent localized pain particularly in bones, are all phenomena that need diagnosis by a physician, it is obvious that the physician must take such complaints seriously enough to carry through his share of the task. It is tragic for patients to present themselves with such symptoms only to be told without adequate examination not to worry. The practicing physician must base his behavior on the realization that reassurance in the face of possible real trouble, even though it be only remotely possible, is a greater breach of his obligations to his patient than failure to reassure when conditions warrant. The approach to the patient's complaint need not be in the least alarmist. The doctor can say, first, that the patient has been wise to come for advice; second, that the chances are great that the presenting complaint does not mean cancer; third, that a gamble to that effect might cost a disastrous price; and, finally, that the probability that the disease is not malignant can be made a certainty by proper study. All this is so simple that it seems hardly to need such emphasis. Let us return, however, to the discouraging experiences that all doctors in cancer centers know. Because of these experiences, it must be emphasized and re-emphasized.

Parenthetically, we must add that alertness to cancer must not be limited by age groups. It is hard for us to realize that the number of deaths from cancer and cancer-like conditions such as leukemia are in children in the neighborhood of five times the number of deaths from poliomyelitis[4]. Insofar as children are concerned, cancer is a greater menace to survival than many of the common diseases. I have seen basal cell epithelioma of the skin in a child of six years and cancer of the rectum at nineteen years, both tumors which are commonly ascribed to the later decades of life. Twenty children under fifteen years of age died in the United States in 1944 of cancer of the pharynx and buccal mucosa[5]. Futhermore, cancer of the breast in women in the twenties is not uncommon.

To repeat, then, the first duty of the physician is to let the thought of cancer pass through his mind with every patient. If any single symptom or sign is presented by the patient which could be explained by the presence of cancer, it is his duty to see that the lead is followed through to final proof or disproof. He must insist that proper study be immediately carried out and that adequate treatment be promptly initiated, usually at some center where the

problems of cancer are met daily. In some instances diagnostic study can be carried out by the doctor himself, particularly in the easily accessible lesions of the skin and mucous membranes. He should know how to perform a biopsy so that the pathologist will have adequate material on which to make a diagnosis. The office biopsy is not difficult. Diagnosis cannot be made in most instances from a particle of material picked from the surface of a lesion. The pathologist must have a zone of normal tissue so that he can tell whether the abnormal cells are actually invasive. Lesions of the lip, of the tongue, of the skin, even of the cervix, can be properly biopsied in the office if the doctor remembers these principles. A drop or so of novocaine is placed in the normal tissue beyond the lesion and a wedge at least two millimeters in thickness is cut from a few millimeters outside the lesion well into its substance and extending through its depth. Such a biopsy may need a suture to control bleeding. If the lesion is very small, such as an early epithelioma of the face, it can be excised with a margin of at least three millimeters on every side and the total specimen sent to the pathologist for diagnosis. In this event he must expect a full report from the pathologist, including a statement of the apparent microscopic margin of normal tissue beyond the tumor.

If the diagnosis is cancer, he should usually advise consultation at a tumor center. An adequate margin for epithelioma is not an adequate margin for melanoma. In any cancer the question of treatment of regional nodes must be answered by an expert. In less accessible cases or when the lesion when first presented is large, the patient is best sent to a cancer center at once. Certainly in all suspected cases of internal cancer first-rate radiological diagnosis as well as possible special procedures such as cystoscopy must be furnished by referral of the patient for specialist care. Primarily, however, the physician must have already carried out in his office all easily available methods of examination already mentioned.

In connection with the office biopsy, one frequent error must be mentioned, namely, the treatment of skin lesions without biopsy. The attempt to destroy skin lesions with caustics, cautery, or diathermy is a mischievous practice. Many a nevus may have become malignant following this type of therapy or was an unsuspected malignancy from the start. Actually a clean excision of such a lesion is less painful for the patient and is the only way of knowing with what one is dealing. Too many patients have been doomed by the physician who treats without knowledge.

Finally, the doctor must recognize fully his responsibility to his patients. It is not inconceivable that an action for malpractice might be sustained in the event that a patient is reassured without proper examination in regard to a lesion later shown to be cancer. Certainly the moral responsibility for such an event is as great as that which is frequently recognized in medico-legal actions. The family physician is the first line of defense against cancer. It is his task to ward off the earliest assault.

REFERENCES

1. Harms, Chas. R., Plaut, Jules A., and Oughterson, Ashley W.: Delay in the Treatment of Cancer. *J.A.M.A.* **121**: No. 5, 335-338, January 30, 1943.
2. Pack, G. T., and Gallo, J. S.: Culpability for Delay in the Treatment of Cancer. *Amer. Jour. Cancer* **33**:443-462, July, 1938.
3. Leech, J. E., and Robbins, G. F.: Delay in the Diagnosis of Cancer. *J.A.M.A.* **135**:5-8, September 6, 1947.
4. Dargeon, H. W.: Cancer in Children from Birth to Fourteen Years of Age. *J.A.M.A.* **136**:459-468, February 14, 1948.
5. Statistics Department, Medical and Scientific Division, American Cancer Society (From "Vital Statistics of the United States, 1944").

XUM

# BENIGN NONSPECIFIC NEOPLASMS OF THE GASTRO-INTESTINAL TRACT

J. L. SMOOT, M.D.,
and
D. W. SCOTT, JR., M.D.,
Fredericksburg, Virginia.

For many years it has been recognized that certain tumor-like formations occur in both the large and small bowel which do not conform to any specific pathology. The literature dealing with this rather vague and nebulous subject has been extensive and has covered a period of time dating back to the last few years of the past century. The origin, like all "origins" in medicine, is a matter of dispute and it is impossible, and irrelevant, to be concerned with who was the first to call attention to this subject in writing. One of the earliest and most forceful writers was Monihan[1] who, in 1907, read a paper entitled "The Mimicry of Malignant Disease in the Large Intestine", in which he reported six cases with a mistaken pre-operative diagnosis. In 1908 A. W. Mayo and Robson[2] detailed the record of eleven abdominal cases in which they had failed to differentiate inflammatory from malignant disease. In 1909 Braun[3] gave a report on the known malignant tumors, and in the same year leDentu[4] described similar cases under the heading "False Cancers and Inflammatory Tumors of the Abdomen". In 1931 Mock[5] gave a full description of this condition which he called "Infective Granuloma". He considered these tumor-like masses to be influenced by a low grade non-specific infection and characterized by a piling up of granulation tissue showing varying stages of necrosis and fibroblastic changes, and true scar tissue and reparative tissue growth. Mock considered the granuloma due to a low grade organism present at the start, and causing interference with the blood supply and resulting tissue changes. Wilensky,[6] in an article which appeared in the *Medical Journal and Record* in 1932, summarized his attitude toward the problem by stating, "Non-specific granuloma of the intestinal tract offers no characteristic clinical concept because the etiology, symptoms and signs are protean and indefinable".

The above introduction will in some small measure serve to show the diversity of opinions set forth concerning granulomatous lesions of the gastro-intestinal tract. Mock, whose article has been cited, has sharply differentiated true granulomas, represented by tuberculosis, syphilis and actinomycosis, from those of unknown etiology, and thus nonspecific lesions. Thus, for the first time some orderliness began to appear and some of the existing confusion was swept away.

The article of most far reaching consequences, and the one which did most to popularize this subject appeared in 1932. In this year Crohn, Ginzberg and Oppenheimer[7] published in the *Journal of the American Medical Association* their monumental and oft quoted description of "regional ileitis", a disease which is more often referred to as "Crohn's Disease". So clear cut was their description and so logical their deductions that this article stands as a masterpiece in medical literature. In the original description it was stated that the condition was limited to the terminal ileum, the process beginning at, and involving in its maximum intensity, the ileocæcal valve. The disease was said to run a relatively benign course and all sufferers who survived operation were restored to good health. In those in whom operation was not performed the lesion tended to slow perforation with resulting adhesions and

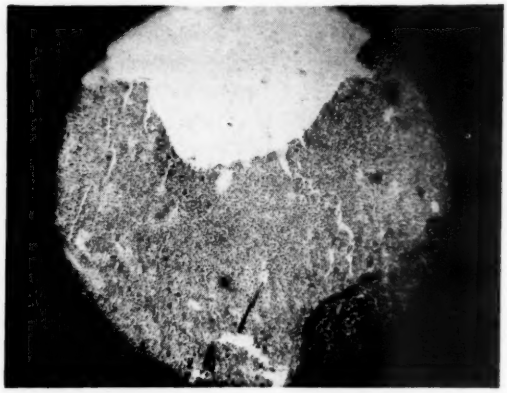


Fig. I. Section through the ulcerated portion of the bowel showing ulceration of mucosa, varying stages of necrosis, and a few giant cells. The presence of organisms was not demonstrated.

fistulae formation, a feature of the disease which is today considered nearly pathognomonic. In subsequent articles Crohn[8] repeatedly stressed the frequency of fistulae formation. Colp[9] and Ginzberg[10] stated that fecal fistulae due to regional ileitis may appear following drainage of a residual abscess which in turn may develop months or years after

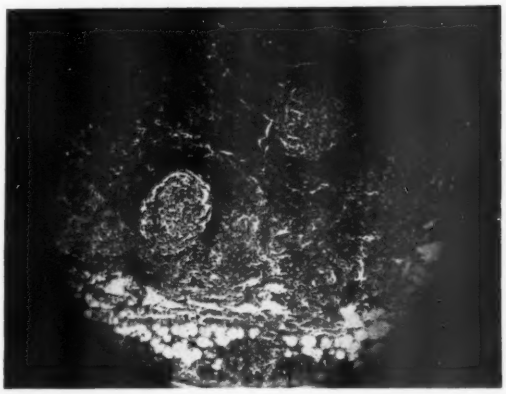


Fig. II. Section of involved lymphnode. Normal architecture of the node is preserved. The peripheral sinuses are filled with lymphocytes and the follicles show hyperplasia and active germinal centers.

the primary operation. Microscopically there are no specific features, but varying degrees of acute and subacute and chronic inflammation in which giant cells of the foreign body type are seen.

Following Crohn's article a voluminous literature on the subject came into being. Since 1932 approximately 160 papers dealing with this condition are listed in the "Cumulative Index". Shapiro,[11] reviewing the literature in August, 1939, tabulated 519 cases of regional ileitis in whom operative procedures had been carried out.

In Crohn's original series there are twice as many males as females. Statistics from the Mayo Clinic[12] reveal their youngest patient was nine years of age, and their oldest sixty-six. Innumerable causes have been set forth and as many discarded for the lack of supporting clinical evidence. Ward and Norrish[13] suggested that disease of the mesenteric glands might be primary and that the ileitis might be due to a lymphatic block. So far as we are aware, however, no pathological changes, such as are seen in this disease, have been reported as occurring in lymphatic adenitis *per se*. Certainly this is not a more advanced stage of the type of mesenteric adenitis, specific or otherwise, seen in children and early adolescents.

For the sake of clarity, then, it might be well to epitomize the three distinct types of granulomatous tumor-like masses which occur in both the large and small bowel, and which fall into distinct and separate classes[14]:

1. Those which occur in association with that class of specific diseases, namely, tuberculosis, syphilis, actinomycosis, Hodgkin's disease and lymphosarcoma. To this might be added the strictly left sided lesions of granuloma inguinale, which

Fig. III. Barium enema showing obstruction at the ileocaecal valve. The contrast media did not enter the ilium in spite of considerable manipulation and palpation.

as far as we are able to ascertain, has never occurred in the right colon.

2. The non-specific granulomata of, and associated with, a presumable low grade infection.

3. Those occurring with true regional or terminal ileitis which is now a definite pathological and clinical entity.

XUM

Notwithstanding the articles dealing with this subject, and they are legion, some confusion and obfuscation still persists in that no clear cut differentiation between regional ileitis and benign non-specific granulomata has been established and strictly adhered to. Regional ileitis is a symptom complex characterized by pain in the right lower quadrant of the abdomen, diarrhea, fever, and occasional obstructive phenomena with the formation of fistulous tracts to the nearby viscera or the abdominal wall. The X-ray evidence of the disease is typical and everyone is familiar with the so-called Kantor's "string sign" and the "lead pipe" appearance which this disease gives to the involved portion of the bowel.

As Rosser,[15] in 1945, pointed out, objection has been raised to separating from this granulomatous and migratory lesion a rarer group of massive localized nonspecific neoplasms which occur in the colon and in other portions of the bowel. Crohn[16] believes that although the etiologic agent may be the same, the gross appearance, the anatomic location and dissimilar method of growth and extension warrant their separate consideration.

Localized and non-specific granulomata of this type, while of unknown origin, and while presenting a microscopic picture somewhat resembling regional enteritis, do not cause diarrhea, stricture of an entire segment or fistulous tracts, and they tend to increase in size while only involving one particular localized area of the bowel. It is extremely difficult to suggest a clear cut diagnostic differentiation between cancer and these inflammatory lesions because of such common factors as tumefaction, similarity of roentgenographic appearance, and chronicity. All of the inflammatory conditions, however, are usually associated with some temperature elevation and with an increase in the leucocyte count; anemia is not pronounced, and the tumor is usually more sensitive to palpation. This absence of anemia we consider a very significant point in differential diagnosis since Rankin[17] and others have repeatedly stressed the frequency and importance of severe and profound anemia associated with carcinoma of the right bowel. In a surprising number of individuals who harbor malignancy of this portion of the gastro-intestinal tract this is the presenting symptom. It is quite fortunate that surgical intervention is indicated in each of these conditions, because if the patient has received the extended and adequate preparation now considered essential in large bowel surgery before the abdomen is entered, any discrepancy in the pre-operative diagnosis can be safely corrected and the proper procedure instituted at the time of surgery.

A case has been chosen which illustrates this non-specific granulomatous neoplasm.

A. L. S., a nineteen year old white male, was admitted to the Mary Washington Hospital on 10-30-47, complaining of recurrent attacks of cramp-like abdominal pain, located in the right lower quadrant. Onset was said to have been some three to four months previous, although the patient's mother stated that this pain had been noted on occasion during the last three to four years, but no significance was attached to it because of the infrequence of its occurrence. During the three to four months preceding admission, there was progressive increase both in frequency and severity of his symptoms. He vomited only once, and that was on the night before admission. No change in bowel habits had been noted, nor was there any history of passage of blood or mucus, or of clay colored stools. There had been slight weight loss during the last two months.

Family *history* and past history were non-contributory.

*Physical examination:*—Temperature 99.2 (M); P. 80; Blood pressure 120/60; Resp. 20. A well developed, thin white male of stated age, appearing moderately and chronically ill. Skin, dry and warm. Eyes, ears, nose, throat, heart and lungs showed no abnormalities. The abdomen, on inspection, showed intestinal patterns in the R. L. Q., and tenderness was elicited on deep palpation in this area. An indefinite mass, apparently about the size of an egg, was felt in the region of the cæcum, but exact delineation was not possible. Gurgling sounds were elicited by pressure over this area. The abdomen was otherwise negative; both inguinal rings were snug and no impulse was noted on coughing.

*Laboratory:*—Hemoglobin 88% (Sahli); white blood cells 7,800; Polys 79%; Lymphs 31%. On three consecutive days stool examinations were negative for blood, ova, and parasites, Wasserman, and Kahn both reported as negative and no abnormal urinary findings were present.

*X-ray:*—A barium enema demonstrated no abnormalities to the cæcum. The cæcum was very

irritable and spastic. A long appendix was filled and extended medially and upward in the course of the ileum. The ileum was not filled, in spite of considerable manipulation and palpation.

G.-I. series—Severe pylorospasm; otherwise, no abnormalities were demonstrated in the upper gastro-intestinal tract. Serial films of the small bowel showed the barium to pass much more slowly than usual, but there was nothing to suggest either partial obstruction or an inflammatory lesion above the ileo-cæcal region. The presence of a mass in the ileo-cæcal region was suggested by the absence of barium-filled loops of small gut over this area at all times.

Operation was advised and accepted. Accordingly, preparation was made for exploration. Blood typing and matching were carried out, colonic irrigations were done three times daily for four days and sulfasuxidine in the prescribed amount (0.25 gm. per kilo of body wt.) given by mouth. Twelve hours before operation gastric suction was started, and intravenous fluids given to supplement loss through the gastric tube. On November 11, 1947, under spinal anesthesia the abdomen was opened through a right para-rectus incision. Upon examition of the cæcal area the appendix was noted to be normal; the ileum was slightly thickened but the serosa of the bowel was normal in appearance. The cæcum was mobilized by incising the lateral reflection of the peritoneum and a tumor mass was felt which was intrinsic in the wall of the cæcum and mainly in the ileocæcal valve. The mesentery of the ileum and ascending colon was studded with small, discreet, soft lymph nodes, several of which were removed for pathological study. Resection of twelve inches of the terminal ileum and the ascending colon was carried out by division with the actual cautery; the ends of the bowel were closed with a Parker-Kerr stitch and side-to-side anastomosis done. The patient stood the operative procedure well, and his post-operative course was more or less uneventful. The Wangensteen tube was removed on the sixth day and he tolerated a full diet two days after its removal. He was discharged twelve days after operation in an eminently satisfactory condition.

Pathological report of the tissue sent for examination showed some thickening of the wall of the bowel with a heavy infiltration of round and plasma cells, and in some areas acute necrosis. A fibrous tissue reaction was noted, and scattered areas were seen in which giant cells of the foreign body type were present. The architecture of the lymph nodes was preserved, and the peripheral sinuses filled with lymphocytes and polymorphonuclear leucocytes, some of which were eosinophiles. The follicles showed hyperplasia and active germinal centers. Careful search showed no specific organisms.

This patient has been seen twice since discharge from hospital, the last time on January 5, 1948, two months after operation. His progress has been one of tremendous improvement. He has gained sixteen pounds in weight; he is completely relieved of pain and states he "feels fine".

The treatment of this condition has undergone many changes and modifications. Holm[18] in 1933, definitely showed, both operatively and clinically, the side-tracking operations were a constant menace to the health of the patient. Mayo and Judd,[19] writing in the *Journal of the American Medical Association* in 1941, advocated resection of the involved portion of bowel in a two stage procedure. With the refinements in technique and the aid of sulfasuxidine, and the more recent sulfathalidine, as added adjuncts, the concensus is now overwhelmingly in favor of extensive resection in a one stage procedure. The question of the best type of anastomosis is still more or less a personal preference and the one with which the operator is most familiar is entirely suitable. Generally speaking, in dealing with bowel resections the closed type of anastomosis has more advocates and probably more to recommend itself. In the case presented side-to-side anastomosis was done because of the discrepancy of the size of the lumen of the two ends to be united, and because it was technically less difficult. In any event, with proper and extended pre-operative care the mortality is low, and certainly far below the figures set forth in the early reports.

## CONCLUSIONS

The essential differences between the pathological and clinical course of regional ileitis and the circumscribed granulomatous non-specific neoplasm of the large and small bowel are pointed out. These differences are so marked and of such magnitude that one is forced to the conclusion that while of a similar microscopic picture the course and behavior of the lesions is sufficient to warrant their being considered as different clinical entities. Regional ileitis

XUM

is characterized by fistulae formation, and the disease is not localized to any one segment of the bowel, but is most often seen in two or more areas which are very aptly described as "skip areas". The roentgenographic appearance is typical, Kantor's "string sign" and "lead pipe" being the terms used to convey what is distinctive of the X-ray findings. The granulomata, on the other hand, is the antithesis of this. Admittedly the microscopic appearance is not unlike in the two lesions, but the similarity goes no further. With the granulomatous neoplasms fistulae formation is not common, "skip areas" are not seen, and the changes observed in X-ray examination more nearly approximate those seen in obstructing carcinoma. The changes are localized so that not as great a portion of the bowel is directly involved.

Clinically, the granulomatous neoplasms are most often confused with carcinoma. The absence of anemia in the former serves as one method of differentation. Thorough and adequate pre-operative preparations is necessary in both as it is in any and all large bowel surgery.

SUMMARY

1. A brief review of the literature dealing with granulomatous lesions of the gastro-intestinal tract has been presented that the perplexity and confusion that is so evident in the minds of those who have written about this subject may be made apparent.

2. A case demonstrating the presence of a benign granulomatous neoplasm of the ileocæcal valve is presented, and the treatment outlined.

3. Additional evidence has been presented in the hope of offering some further basis for differentiation of benign non-specific granulomatous neoplasms from other lesions of the bowel which have previously been grouped under the generic term of granulomata, and specifically from that of regional ileitis.

BIBLIOGRAPHY

1. Moynihan: *Edinb. Med. Jour.* **21**:228-238, 1907.
2. Mayo, A. W., and Robson: *J.A.M.A.* **10**:314-319, 1908.
3. Braun, H.: *Dtsch. Z. Chir.* **10**:1, 1909.
4. LeDentu: *Bull. Acad. Med., Paris* **70**:111, 1909.
5. Mock: *Surg., Gynec. and Obst.* **52**:672, 1931.
6. Wilensky, A. O.: *Med. Jour. and Rec.* **135**:445, 1932.
7. Crohn, B. B., Ginzberg, L., and Oppenheimer, G. D.: *J.A.M.A.* **99**:1323, 1932.
8. Crohn, B. B.: *J. Med.* **19**:84, 1938.
9. Colp, R.: *Ann. Surg.* **107**:74, 1938.
10. Ginzberg, L.: *Surg.* **7**:515, 1940.
11. Shapiro: *Am. J. Med. Sci.* **198**:269, 1939.
12. Ileitis: Univ. of Minn. Hosp. **7**:94, 1935.
13. Ward and Norrish: *Brit. J. Surg.* **25**:530, 1938.
14. Lick, Maxwell: *Int. Abst. Surg.* **66**:340, 1938.
15. Rosser, C.: *J.A.M.A.* **127**:568, 1945.
16. Crohn, B. B., Ginzberg, L., and Oppenheimer, G. D.: *Ann. Surg.* **98**:1046, 1943.
17. Rankin, F. W., and Graham, A. S.: Cancer of the Colon and Rectum: Thomas, 1939.
18. Holm, C. E.: *Surg., Gynec. and Obst.* **56**:746, 1933.
19. Mayo, C. W., and Judd, E. S.: *J.A.M.A.* **119**:836-838, 1941.

*1101 Caroline Street.*

---

**Blood Plasma With Dicumarol.**

Hemorrhage in persons who overreact to dicumarol, a drug which prevents blood from clotting, can be controlled by administering blood plasma, say three physicians from the Departments of Medicine and Surgery, Columbia University College of Physicians and Surgeons, and the Presbyterian Hospital, New York.

Writing in the October 9 issue of *The Journal of the American Medical Association,* Stuart W. Cosgriff, Richard J. Cross, and David V. Habif say that 20 to 25 per cent of persons who receive dicumarol as treatment for blood clots are "hyperreactors."

In these people the usual dose of the drug not only prevents the blood from clotting but also produces a dangerous condition in which hemorrhage may occur. Administration of blood plasma is immediately effective against this condition, the physicians point out.

# HEMORRHAGIC DISEASES; CLASSIFICATION, DIAGNOSIS AND TREATMENT*

HOWARD P. HOLT, M.D.,
and
BYRD S. LEAVELL, M.D.,
Charlottesville, Virginia.

Some knowledge of the diseases characterized by abnormal bleeding is important in any type of practice because localized bleeding is frequently the presenting complaint and may be in the nature of epistaxis, gastrointestional hemorrhage, menorrhagia, hemoptysis, hematuria, traumatic bleeding, or a painful joint. The purpose of this paper is to present briefly information which we hope will aid in the recognition and management of hemorrhagic conditions.

Hemostasis in man is a complex process. While our knowledge of the process is incomplete, we recognize three important factors (chart I). These are the vascular system, the blood platelets, and blood coagulation.

Vasoconstriction is a property of all parts of the vascular system and its importance in the control of bleeding from large blood vessels long has been appreciated. More recently McFarlane[1] has maintained that the primary factor causing cessation of capillary bleeding is constriction of the capillaries.

The literature contains many different opinions regarding the nature, name, action and relative importance of the various factors concerned in blood coagulation. For practical purposes it may be considered a two stage process in the first of which prothrombin, in the presence of thromboplastin, calcium, and possibly a globulin substance, is converted to thrombin. In the second stage the thrombin thus formed converts the fibrinogen to fibrin.

The hemostatic seal begins with platelet agglutination which occurs as a result of contact of the platelets with a rough surface. Some of these platelets undergo lysis, thromboplastin is liberated, and blood coagulation occurs with the appearance of fibrin strands. Intact platelets adhere to the fibrin and by agglutination cause the fibrin strands to bend and contract. This produces retraction of the clot.

Recently Quick[3] has reported experimental evidence to support the existence of thromboplastinogen, which is his term for a precursor of thromboplastin.

FACTORS IN HEMOSTASIS

A. Blood Vessels—(Vasoconstriction)
B. Blood Platelets
   1. Agglutination, Adhesiveness, Thrombosis
   2. Blood Coagulation
   3. Clot Retraction
C. Blood Coagulation

Step I Prothrombin CA + { Thromboplastin / Glob. Subs. (?) } → Thrombin

Step II Fibrinogen + Thrombin → Fibrin

CHART I

Quick[2] in his monograph on hemorrhagic diseases termed the platelets the most fundamental factor in hemostasis. He felt that they have the property of agglutination, initiate coagulation by liberation of thromboplastin, cause clot retraction and seem to be responsible for an adhesive factor which anchors the clot. The combination of the last two factors furnishes some degree of vasoconstriction. He believes that this substance is a plasma constituent which is activated by an enzyme, thrombokinase, liberated from platelets undergoing lysis. There are also many other authors[4,5] who do not feel that the platelets are the source of thromboplastin.

Examination of a patient with abnormal bleeding is designed to detect the defect in the hemostatic mechanism and to determine the cause of this defect. It is often possible to realize the first objective, often impossible to attain the second.

The history should emphasize information about

*From the Department of Internal Medicine, University of Virginia Hospital, Charlottesville.
Read at the annual meeting of the Medical Society of Virginia in Roanoke, October 13-15, 1947.

LABORATORY TESTS IN HEMORRHAGIC CONDITIONS

| Syndrome | Defect | Bl. T. | T. T. | Plate | Co. T. | Pr. T. | Cl. R. |
|---|---|---|---|---|---|---|---|
| Thrombocytopenia Primary Secondary | Plate. Capil. | + | + | — | N | N | — |
| Pseudohemophilia | Capil. (?) | + | N | N | N | N | N |
| Allergic Purp. "Sympt" Purp. Infect., Uremia, etc. | Capil. | N | +/N | N | N | N | N |
| Vit. "C" Defic. | Capil. | N | + | N | N | N | N |
| Liver Damage Obstr. Jaund., Dicoumarin, etc. | Prothrombin | N | N | N | N | + | N |
| Hemophilia | Glob. | N | N | N | + | N | N |
| Fibrinogenopenia Liver Dis. Constitut. | Fibrinogen | N | N | N | + | N | N |

N Normal + Increased — Diminished

CHART II

the diet, allergic manifestations, recent infections, recent drugs, exposure to toxic industrial agents or radiation, previous episodes of bleeding and familial bleeding history.

Particularly important in the physical examination are ecchymoses, petechiae, telangiectases, lymphadenopathy, splenomegaly, hepatomegaly, sternal tenderness and jaundice.

Laboratory procedures should include a complete blood count, careful examination of the smear, bleeding time, coagulation time, prothrombin time and clot retraction. The platelets should be counted or estimated and if reduced, examination of the bone marrow is indicated. Examination of the bone marrow is also indicated if there is suspicion of leukemia or aplastic anemia. With the exception of the prothrombin time and examination of the bone marrow, no special equipment is necessary for these tests. Allergic studies, renal function tests or liver function tests may be indicated.

Usually the hemostatic defect is disclosed by tests concerned with the bleeding and clotting mechanism. Results of these tests in various hemorrhagic conditions are shown in chart II. Of course the diagnosis depends on the cause of the defect. For example the results of these tests in various patients with primary thrombocytopenic purpura are identical with those found in thrombocytopenic purpura secondary to leukemia, aplastic anemia, drug toxicity or allergy.

CLASSIFICATION OF HEMORRHAGIC DISORDERS

| Defect | Clinical Syndrome |
|---|---|
| I. Platelets | (1) Thrombocytopenic Purp.—"Primary"<br>(2) Thrombocytopenic Purp.—"Secondary" (Leukemia, Allergy, Aplasia, etc.) |
| II. Capillaries | (1) Allergic Purp., "Toxic" Purp.<br>(2) Vitamin "C" Deficiency<br>(3) Hereditary Telangiectasia<br>(4) Thrombocytopenic Purp.<br>(5) Pseudohemophilia (?) |

III. Blood Coag.

| | |
|---|---|
| A. Prothrombin | (1) Liver Damage |
| | (2) Obstr. Jaundice |
| | (3) Hem. Dis. Newlyborn |
| | (4) Dicoumarol Therapy |
| B. Fibrinogen | (1) Severe Liver Damage |
| | (2) Constitutional |
| C. Euglobulin (?) | (1) Hemophilia |
| D. Heparin Incr. | (1) Heparin Therapy |
| | (2) Anaphylaxis |

CHART III

With our present knowledge classification of the hemorrhagic disorders according to etiology is unsatisfactory. While not ideal, classification according to the defect in hemostasis helps to systematize our thinking about these diseases and aids in diagnosis. Such a classification is presented in Chart III.

## HEMORRHAGIC DISORDERS ASSOCIATED WITH REDUCED PLATELETS

Thrombocytopenic purpura is characterized by spontaneous bleeding into the skin or from the mucous membranes, reduced platelet count, prolonged bleeding time, normal clotting time and poor clot retraction. The tourniquet test is usually positive if active bleeding is present. The anemia and leukocyte count are not out of proportion to the amount of bleeding present and pathological cells are absent from the peripheral blood and bone marrow. The spleen and lymph nodes are not appreciably enlarged.

Many fundamental details of the disease have not been established. The abnormal bleeding has been attributed to a capillary defect and to reduction of the platelets. The cause of either of these defects has not been satisfactorily explained. By direct visualization, McFarlane[2] noted faulty contraction of the capillaries after puncture and felt that this explained the abnormal bleeding. Increased capillary fragility has been demonstrated by the tourniquet test. A "critical" level of platelets has not been established. It is generally agreed that the platelets are formed from megakarocytes in the bone marrow and that in primary thrombocytopenic purpura the megakaryocytes are present in normal

M.B. 71 C.F. CC "Bleeding Gums" 5 Mo.

Hist.: 5 Mo. Bleeding Gums, Increasing Severity
3 Wks. Epistaxis. Purpura, Vertigo, Syncope

Exam.: Nasal, Conjunct., Retinal, Dermal Hemorrhages
Unable to Speak, No Localized Neurolog. Signs.

| Date | Hb. | R. B. C. | W. B. C. | Bl. T. | T. T. | Plate | Co. T. | Pro. T. | Cl. R. |
|---|---|---|---|---|---|---|---|---|---|
| 5-12-46 | 7.5 | 2.5 | 7.2 | 15 | + | 25 | 12 | 15/14 | 0 |
| 5-14 | | 2.9 | | | | 60 | | | |
| 5-16 | 8.5 | 2.9 | 7.8 | | | 42 | | | |
| 5-18 | 7.0 | 2.6 | 7.6 | | | 30 | | | |
| 5-20 | 7.0 | 3.1 | 6.4 | 9 | | 30 | 9 | | 0 |
| 5-22 | 8.5 | 2.7 | | | | 30 | | | |
| 5-24 | 5.0 | 1.4 | | 12 | | 26 | 9 | | |

Death

Marrow: Erythroid and Megakaryocytic Hyperplasia

Diag.: Thrombocytopenic Purpura, Primary

Autopsy: Mucosal Hem. Throughout GI Tract, Esp. Stomach. Diffuse Cerebral Hemorrhages.

CHART IV

XUM

or increased numbers. The thrombocytopenia has been attributed to excessive destruction by the spleen[6] and to diminished production due to an inhibiting influence exerted by the spleen[7]. It has been our experience that most patients of this type, when abnormal bleeding is present, have evidence of both capillary defect and a platelet deficiency associated with a normal or increased number of megakaryocytes, many of which are abnormal in appearance.

Primary thrombocytopenic purpura may occur at any age, in any race, and in either sex. The onset may be gradual or sudden; the manifestations may be mild or severe and the spontaneous duration of the symptoms may be short or long. Although some individuals may have a single episode of bleeding, in most instances the disease is characterized by a more or less chronic state in which spontaneous relapses of varying degrees of severity alternate with remissions which vary in duration. Some individuals, especially in the younger age group, have spontaneous remissions that are apparently permanent. On the other hand an apparently mild case or one in remission may suddenly develop a fatal or crippling intracranial hemorrhage or an exsanguinating hemorrhage from the G.I. tract. It is this variation in the clinical course that makes evaluation of prognosis and therapy, especially the advisability of splenectomy, so difficult.

Therapy with transfusions, vitamin C, vitamin K, irradiation, and snake venom probably do little beyond giving the patient time for spontaneous improvement to occur. If possible the patient should have advantage of an allergic study that includes skin tests and basal allergy diet. Foci of infection of the teeth, sinuses, etc., should be sought and corrected if possible. If no other cause for thrombocytopenia can be found, the decision regarding splenectomy must be made. This operation is often followed by dramatic cure but it carries a definite risk, especially in the acute stage, and there is no assurance that a disappointing relapse will not occur at any time after splenectomy.

We believe that splenectomy is indicated in chronic or recurrent cases and is best performed during a remission if possible. If the initial attack is mild or improvement prompt, splenectomy may be postponed temporarily or indefinitely in the hope of a spontaneous remission. The patient with severe bleeding in the initial attack or in relapse presents the most difficult problem. We feel that if improvement in the clinical manifestations and laboratory tests does not occur within a few days, it is safer to proceed with splenectomy, being prepared to give numerous transfusions during the operation and in the postoperative period. We have had one patient who required 40 transfusions during a period of a few days who made a satisfactory

B.K.H. 17 W.M. No. 227996. CC "Bleeding"
Hist.: Mumps and Orchitis. 2 Mo. Before Adm.
For 1 Mo. Epistaxis, Bleeding Gums,
Purpura, Hematuria, Melena.
Family Hist., Past Hist., Allergy Hist.—Neg.
Exam.: Num. Ecchymoses, Petechiae, Spleen Palpable

| Date | Hb. | R. B. C. | W. B. C. | Bl. T. | T. T. | Plate | Co. T. | Pro. T. | Cl. R. |
|---|---|---|---|---|---|---|---|---|---|
| 7-8-46 | 11.2 | 3.4 | 7.0 | 30+ | + | 0 | 8 | 15/15 | 0 |
| 7-10 | 13.5 | 4.1 | | 16+ | | | | | |
| 7-12 | | | | 22+ | | 0 | | | |
| 7-15 | | | | 10 | | | | | |
| 7-17 | | | | 23 | + | | | | |
| 7-23 | | | | 30+ | + | 12 | | | |
| 8-1 | 13.5 | 4.8 | 12.0 | 18 | + | 18 | | 15/15 | |
| 8-2 | | | Splenectomy | | | 5 Transfusions | | | |
| 8-3 | | 5-2 | | | | 60 | | | |
| 8-4 | | | | | | 85 | | | |
| 8-5 | 15.5 | 5.5 | | 2 | 0 | 450 | | | |

Marrow: Many Immature Megakaryocytes: 6% Eosinophils
Elimination Diet, Allergy Study—Neg.
Diag.: Thrombocytopenic Purpura, Primary

CHART V

recovery. Our experience has led us to believe that if adequate blood is available practically all of these patients can be carried through the operation and immediate post-operative period, thereby giving them the maximum chance of relief from the bleeding tendency.

Chart 4 shows the course of the disease in an elderly negro woman seen during the first manifestation of purpura. All characteristics of the disease were present. Because of her poor general condition, her age, the difficulty in obtaining blood of the proper type and numerous mild transfusion reactions which occurred, it was decided to give her supportive therapy in the hope of spontaneous remission. Signs of intracranial hemorrhage were present on admission. Despite therapy with blood, vitamin C, vitamin K, liver extract, and other measures, bleeding continued and death ensued. Autopsy revealed widespread intracranial hemorrhage and diffuse bleeding from the mucous membrane of the gastro-intestinal tract. This case is presented as an example of fatal bleeding from thrombocytopenic purpura which was not treated with splenectomy.

In chart 5 are shown data of a patient with thrombocytopenic purpura who has now had a 15 month remission following splenectomy. At the time of operation he was not in complete remission but there was little clinical evidence of active bleeding. Following operation the platelets began to increase within 24 hours and in a few days reached normal limits coincident with return of the tourniquet test and bleeding time to normal.

The data on another patient with thrombocytopenic purpura and a normal leukocyte count is presented in chart 6. In addition to thrombocytopenia this patient had a positive tourniquet test, prolonged bleeding time and hemorrhagic manifestations. Examination revealed a rather firm spleen which was somewhat enlarged and a careful study of the blood smear and bone marrow revealed that the thrombocytopenia was secondary to chronic myelogenous leukemia with a normal total leukocyte count. Splenectomy in such patients generally results in death.

### HEMORRHAGIC DISORDERS DUE PRIMARILY TO CAPILLARY DEFECT

A. *Purpura Due to Capillary Defect.* This group is characterized by petechiae or abnormal bleeding associated with normal bleeding time, normal platelet count, normal coagulation time, normal clot retraction and normal prothrombin time. The tourniquet test is abnormal in some of these patients but not in all.

Purpura may occur in many disorders and may be the presenting symptom. It occurs in meningoccemia, Rickettsial infections, scarlet fever, cardiovascular disease, particularly when associated with uremia or bacterial endocarditis, disseminated lupus, vitamin C deficiency and allergic disorders. In most instances the proper diagnosis can be made by clinical observation combined with the proper study of the bacteriology and chemistry. Usually the bleeding in this group is confined to the skin and mucous membranes and is not severe. When

G.P. 64 W.M. C.C. "Hemorrhages"

Hist.: 12 Mo. Ago—Hem. After Tooth Extracted. 4 Mo. Duration Epistaxis. Bleeding Gums, Melena, Petechiae on Extrem. Poor Response to Transfusion, Liver Extr., Folic Acid, Rutin.

Exam.: Pallor, Petechiae, Ecchymoses, Bleeding Gums. Liver 8 CM. ↓, Spleen 7 CM. ↓, Sternum Tender.

Lab.:

| Hb. | R.B.C. | W.B.C. | Bl. T. | T.T. | Plate | Co. T. | Pro. T. | Cl. R. |
|---|---|---|---|---|---|---|---|---|
| 6.6 | 2.1 | 6.0 | 30 | + | 0 | N | 15/13 | ? |

Differential Count:

| | Bl. | Pro. | Myel. | Juv. | Bland. | Seg. | Lym. | Mon. | Nrc. | Mega. |
|---|---|---|---|---|---|---|---|---|---|---|
| Blood | 1 | 4 | 32 | 1 | 7 | 32 | 15 | 5 | 23 | — |
| Marrow | 8 | 12 | 32 | 10 | 19 | 11 | 6 | 0 | 15 | Pres. |

Diag.: Leukemia, Chronic, Myelogenous, Thrombocytopenia, Secondary.

CHART VI

XUM

allergy is the responsible factor, transudation of fluid and blood into the intestinal wall or periarticular tissue may present a puzzling and complicated picture. Such cases are known as Henoch's or Schonlein's purpura. Fortunately such isolated manifestations of allergy are rare. Most often they are accompanied by more common allergic signs and symptoms.

Therapy in this group is directed towards correcting the underlying defect. Vitamin C and rutin may be of benefit in some cases.

A case of this type is presented in chart 7. This youngster had joint pain and swelling, abdominal pain and vomiting, fortunately associated with some skin lesions. The character of the skin lesions and the character of the swelling of the knee were very helpful in this diagnosis. The disappearance of the lesions on an elimination diet and their reappearance on the administration of tomatoes clearly established it as a sensitivity reaction.

H. K. 2½ W.M. No. 144009. CC "Pain In Abdomen"

Hist.: 3 Wks. Prev.—Pain, Redness, Swelling Knee and Upper Leg of 5 Days' Duration.
2 Wks. Prev.—Vomited Small Amt. Blood
1 Wk. Dur.—Red, Pruritic Papules Legs
1 Da—Rlo Pain, Vomiting, 2 Normal B.M.

Exam.: Red Maculopapular Lesions Legs and Buttocks
No Fading on Pressure; Older Ones Pigmented.
E K G, Sed. R., X-ray Chest—Normal.

| Hb. | R.B.C. | W.B.C. | Bl. T. | T.T. | Plate | Co. T. | Pro. T. | Cl. R. |
|---|---|---|---|---|---|---|---|---|
| 12.0 | 5.0 | 11.0 | 2 | 0 | 500 | 3 | 15/15 | N |

Elimination Diet—Lesions Faded.

Tomatoes—In 6 Hrs. Pruritus Erythematous and Purpuric Lesions.

Diag.: Allergic Purpura.

CHART VII

B. *Pseudohemophilia.* Pseudohemophilia is characterized by prolonged bleeding time, normal coagulation time, normal clot retraction, and normal platelet count. The tourniquet test is said to be positive in about half the cases. The abnormal bleeding is generally manifested by ecchymoses, occasionally by hemarthroses, rarely by petechiae. This unusual disease was first described by Von Willebrand[8] in 1926. When he investigated a family of 58 members, 23 of whom had abnormal bleeding. There appears to be a familial factor in the disease which affects both male and female. Either sex may transmit the disease with or without manifestation of abnormal bleeding.

The etiology and pathogenesis are generally considered unknown. Direct visualization of the capillaries in patients with this disorder is said to reveal that the capillaries are distorted in appearance and fail to contract properly after needle puncture. Other authors have not confirmed these observations[9,10]. We have studied the capillaries in two patients of this type and in both, the capillaries appeared distorted and in one capillary contraction appeared to be faulty.

Fortunately pseudohemophilia is rare. Only about 73 cases have been reported in the literature up to November, 1946[10]. Twenty-seven per cent had some familial history of bleeding. Hemorrhage most frequently occurred from the nose, skin, gums and surgical incisions.

Treatment is unsatisfactory. It is confined to the prevention of trauma, reduction of surgical and dental risks to a minimum and the use of pressure and local hemostatics when active bleeding is present. Transfusions are not accompanied by the dramatic cessation of the bleeding that sometimes occurs in patients with hemophilia.

Chart 8 is presented as an example of this rare disease. The family history and laboratory tests are typical.

C. *Hereditary Telangiectasia.* Hereditary hemorrhagic telangiectasis is a rare disease characterized by small localized groups of maldeveloped blood vessels. All tests concerned with hemostasis are nor-

F.S. 3 W.M. No. 133643

Hist: 11 Hosp. Adm. in 3 Yrs. For Bleeding After Slight Trauma of Mouth, Gums, Nose. Ecchymoses Occurred, No Petechiae or Hemarthrosis.
One Sister Died at 9 Mo. With Purp. and Bleeding
4 Other Siblings, Mother and Father Alive, Well

| | Bl. T. | T.T. | Plate | Co. T. | Pro. T. | Cl. R. |
|---|---|---|---|---|---|---|
| Patient | 27 | 0 | 304 | 6 | N | N |
| Mother | 3 | 0 | N | 12 | — | N |
| Father | 3 | 0 | N | 12 | — | N |

HB. R.B.C., W.B.C., Smears—Normal.

Diagnosis: Pseudohemophilia.
Died Before 4 Years of Age.

Autopsy: All Abnormalities Could be Attributed To Bleeding.

CHART VIII

mal in these patients. However, the bleeding time from the faulty vessels is prolonged. Both sexes are affected and transmit the disease with or without abnormal bleeding.

Bleeding, particularly epistaxis, usually first manifests itself late in the first decade, while visible telangiectases are frequently not present before the third or fourth decade.

Characteristic lesions are small angiomata which most usually occur on the nose, mouth, face or neck.

Since the clotting mechanism is normal, treatment is confined to local pressure or cautery when active bleeding is present.

## HEMORRHAGIC DISORDERS ASSOCIATED WITH FAULTY BLOOD COAGULATION

A. *Hemophilia.* Hemophilia is a blood dyscrasia generally familial in nature which is confined to males and transmitted by females. Thus the sons of an affected male are normal and do not transmit the disease, while the daughters are clinically normal but are capable of transmitting the defect to their sons and the recessive characteristic to their daughters. Although it is theoretically possible for hemophilia to occur in females if the hemophilic patient marries a hemophilic carrier, Wintrobe states that no authentic case of a female bleeder of the hemophilic type is known.

Hemorrhage manifests itself early in life and occurs in response to trauma which at times is quite slight. Bleeding may occur in the subcutaneous tissue, muscles, joints or mucous membranes of the nasopharynx, gastro-intestinal tract or genito-urinary tract. Some joint deformity is nearly always present in the hemophiliac of long standing. The diagnosis can be established by laboratory procedures. An abnormally long coagulation time is characteristic but there is marked spontaneous variation in the result of this test from time to time. Although the blood may not coagulate for hours, when clotting has occurred, clot retraction is normal. Bleeding time, prothrombin time (Quick method), tourniquet test and platelet counts are normal.

Numerous theories have been advanced to explain the faulty coagulation of the blood in patients with hemophilia. One is the conception that the platelets in this condition do not disintegrate normally and coagulation fails to occur because of the lack of active thromboplastin. This theory is based on the observation that the platelets are normal in number. Whereas the addition of calcium, fibrinogen or prothrombin does not affect coagulation, the addition of thromboplastin reduces the coagulation time to normal. A recent investigator[3] has concluded that the platelet is the source of an enzyme which activates the precursor of thromboplastin, which is a plasma constituent. The idea that the platelets do not disintegrate normally is consistent with this new conception. Studies by other authors[12,13,14] have indicated that the factor deficient in hemophilia is a plasma component and that it is most abundant in Fraction I[14,15] of the plasma proteins. This substance is commonly referred to as the "globulin substance".

Treatment of hemophiliac bleeding consists of supplying this globulin substance by means of plasma, transfusions, or more concentrated preparations. This concentrated "globulin substance" is still in the experimental stage and is not available to the general public. Good reports of the use of this substance locally and parenterally have been made[12,13,14]. We have had no experience with the use of this preparation.

B. *Prothrombin Deficiency.* Prothrombin deficiency is characterized by abnormal bleeding associated with a prolonged prothrombin time. The bleeding time, clotting time, clot retraction, platelet count and tourniquet test are normal.

The deficiency arises as a result of failure of absorption of vitamin K in optimal amounts from the intestine or as a result of hepatic damage sufficient to reduce prothrombin formation even though

vitamin K may be present in optimal amounts. Similar deficiencies have been reported in some cases characterized by severe diarrhea and there have been reported a few cases of unexplained prothrombin deficiency of the so called "constitutional type". Quick[2] has pointed out that abnormal bleeding rarely occurs until the prothrombin level falls below 20 per cent of normal. Treatment consists of efforts to correct the underlying disease and administration of vitamin K and whole blood.

The findings in a patient with liver disease associated with prothrombin deficiency are presented in chart 9. Further evidence of liver damage is given by alcoholic history, splenomegaly, hepatomegaly, edema of the feet and results of the other liver function tests. Many spider telangiectases were present on the face, trunk and extremities. Therapy was directed toward improving liver function and consisted of high protein, high carbohydrate, low fat diet and large amounts of vitamins.

G.W.L. 45 W.M. CC "Nose Bleeds" 3 Yrs.

Hist.: Bled Freely All His Life, As Did Twin Brother.
Epistaxis Hemoptysis Hoarseness Incr. 3 Yrs.
Hematemesis and Tarry Stools 6 Wk. Ago.

Exam.: Marked Palmar Erythema, Hepatomegaly, Splenomegaly
Innum. Spider Telangiectases Trunk Face Extrem.

| Hb. | R.B.C. | W.B.C. | Bl. T. | T.T. | Plate | Co. T. | Pro. T. | Cl. R. |
|---|---|---|---|---|---|---|---|---|
| 12.2 | 3.9 | 8.0 | 4 | + | 300 | 20 | 22/15 | N |

Smear: Normal Except 11% Monocytes

| | | | |
|---|---|---|---|
| Ceph. Floc. | 3+ | Ict. Index | 14 |
| Brom. Sulph. | 45% | Retics. | 1% |
| Protein | 6.8 | Hematocrit | 38 |

Diag: Portal Cirrhosis.

CHART IX

C. *Fibrinogen Deficiency.* Abnormal bleeding may be associated with a prolonged coagulation time and low fibrinogen content of the blood. Such a condition is unusual but may arise in the presence of severe liver disease.

A very rare condition known as constitutional fibrinogenemia has been reported a few times in the literature[16]. In this rare condition the blood fails to coagulate. It may be differentiated from hemophilia by the fact that in hemophiliac blood, coagulation is delayed but does occur and can be accelerated by addition of thromboplastin. The addition of thromboplastin will not cause coagulation of blood in which fibrinogen is absent. Strangely enough, some of the cases of afibrinogenemia have survived until adult life. We have not recognized any instances of this rare disorder.

## SUMMARY AND CONCLUSIONS

1. A classification of the states characterized by abnormal bleeding has been presented.
2. Our present concept of these states, differential diagnosis, and treatment is discussed briefly.
3. Although our knowledge of the hemorrhagic diseases is incomplete, usually the correct diagnosis can be made with the aid of procedures that are relatively easy to perform and interpret even though the mechanisms involved are complex and poorly understood.

## REFERENCES

1. McFarlane, R. G.: Critical Review: The Mechanism of Hemostasis. *Quart. Jour. Med.* **10**:1-30, January, 1941.
2. Quick, A. V.: Hemorrhagic Diseases, Chas. C. Thomas, Baltimore, Maryland. 1942.
3. Quick, A. V.: Studies on the Enigma of the Hemostatic Dysfunction of Hemophilia. *The Am. Jour. Med. Science* **214**:272-280, September, 1947.
4. Ferguson, J. H.: Mechanism of Blood Coagulation. *Amer. Jour. Med.* **3**:67-77, July, 1947.
5. Copley, A. L., and Houlihan, R. B.: Studies on the Platelets: VII. The Agglutination of Platelets Isolated from Human, Dog and Swine Blood. *Blood, Journal. Hematology,* Special Issue No. I: Pages 182-198. 1947.
6. Wiseman, B. K.; Doan, C. A., and Wilson, S. V.: The Present Status of Thrombocytopenic Purpura. *J.A.M.A.* **115**:8-13, July 6, 1940.
7. Dumeshek, W., and Miller, E. B.: The Megakaryocytes in Idiopathic Thrombocytopenic Purpura, a Form of Hypersplenism. *Blood* **1**:27, 1946.

8. Von Willebrand, E. A., Hereditare Pseudohemophili. *Finska Lakaresallskapetz Handlingar* **68**: 87, 1926. (Quoted from reference No. 10.)
9. Perkins, W.: Pseudohemophilia: Case Study. *Blood* **1**:497-503, November, 1946.
10. Estren, S., Medal, L. S., Duneshek, W.: Pseudohemophilia, *Blood* **1**:504-533, November, 1946.
11. Wintrobe, M. M.: Clinical Hematology, Lea and Febiger, Philadelphia, Pa., Page 640. 1946.
12. Patek, A. J., and Taylor, F. H. L.: Hemophilia. II. Some Properties of a Substance Obtained from Normal Human Plasma Effective in Accelerating the Coagulation of Blood. *Jour. Clin. Invest.* **16**: 113-124, 1937.
13. Pohle, F. J., and Taylor, F. H. L.: The Use of Globulin Substance Derived from Beef Plasma as a Local Hemostatic in Hemophilia. *Jour. Clin. Invest.* **16**:741-747, September, 1937.
14. Minot, G. R., and Taylor, F. H. L.: Hemophilia: The Clinical Use of Antihemophilic Globulin. *Annals Int. Med.* **26**:363-367, March, 1947.
15. Cohn, E. J.: The Separation of Blood into Fractions of Therapeutic Value. *Annals Int. Med.* **26**:341-352, March, 1947.
16. McFarlane, R. G.: A Boy with no Fibrinogen. *Lancet* **1**:309-312, February 5, 1938.

DISCUSSION

DR. JULIAN R. BECKWITH, Clifton Forge: This is certainly a concise valuable review which gives a lot of useful information in a short space. The mechanism of blood clotting is clearly reviewed and the classification of hemorrhagic disease given is one that should be very helpful, particularly when used in conjunction with the table of laboratory tests for working out a given case with hemorrhagic manifestations.

I should like to comment briefly on several points: First, thrombocytopenic purpura. It has also been our experience that the question of splenectomy is difficult to decide; that is, which cases should have splenectomy and when it should be done. The patient who is doing poorly appears to need a radical procedure but looks as if he cannot survive it, while with the patient who is in remission and doing well, one hesitates to advise a serious abdominal operation such as splenectomy. However, individuals who have chronic idiopathic thrombocytopenic purpura and who have had one or more severe crises should very probably have their spleens removed. This is particularly true for females. The crux of safety probably lies in having plenty of blood available during and after the operation, as so well brought out by Dr. Holt.

Second, I should like to ask Dr. Holt about the value of rutin in hereditary hemorrhagic telangectasia. We have one case who is typical and another who has a number of telengectasic areas on the skin and a history of recurrent episodes of gastro-intestinal hemorrhage.

Third, dicumarol therapy has recently been used a great deal in thromboembolic disease and to a lesser extent in coronary thrombosis with myocardial infarction. We have had the experience that occasionally it is very difficult to produce an effect on the prothrombin time by the administration of the usual dose while at other times this same dose will produce marked lengthening. I should also like to ask what Dr. Holt and Dr. Leavell consider a safe, yet therapeutic level for the prothrombin time.

DR. EDWIN P. LEHMAN, Charlottesville: No more difficult problem is faced by the surgeon than the choice of time for splenectomy in thrombocytopenic purpura. One always hopes that bleeding will cease and that splenectomy can be done in the interval between crises. With modern advances in anesthesia and the support of the patient on the operating table, particularly with transfusions, it might be expected that immediate operative death from splenectomy even in the presence of active hemorrhage should not occur. There is a definite tendency toward operation during the crisis when it becomes certain that the bleeding episode is a major one. I believe that this tendency is justified and that we can expect with adequate transfusions to carry these people through not only the operation but the immediate postoperative period in a considerable proportion of cases until the effect of the splenectomy is established. It does not seem justified at the present day to allow persons to bleed to death while waiting for what has traditionally been considered the optimum time for operation.

DR. HOLT, closing discussion: We have had very little experience with rutin and there are only a few reports in the literature concerning its use. Judging from information in these reports and from descriptions of the pathological defect of familial hemorrhagic telangiectasia, I do not believe that rutin will be of much benefit, if any, in this disease.

We have had experiences similar to those of Dr. Beckwith with the use of dicumarol. However in reply to his question we consider a prothrombin time in the neighborhood of 24 to 30 seconds with a control of 12 seconds to be a safe and effective prothrombin level with dicumarol therapy.

In relation to this question, I would like to mention a recent report by Dr. E. V. Allen, *et al*, on the use of dicumarol in more than 2,000 patients in the Mayo Clinic. In their discussion of the dose of dicumarol they mention the confusion which exists over the terms of "prothrombin time" and "prothrombin percentage". They state that there is no linear relationship between these terms. They have found that a prothrombin percentage within the range of 10 per cent to 30 per cent has been safe and effective.

Prothrombin "time" can be converted to prothrombin "percentage" or vice versa only by use of a graph prepared by plotting the prothrombin times of known serial dilutions of normal plasma with the dilutions which are expressed as percentage of prothrombin. The normal undiluted plasma is considered to be 100 per cent. The prothrombin time for normal plasma may vary from 12

to 19 seconds. This normal variation is due to difference in lots of thromboplastin used in the determinations.

For illustration a prothrombin time of 35 seconds with a normal control of 12 seconds does not have the same significance as a prothrombin time of 35 seconds with a control of 17 to 19 seconds. The prothrombin percentage of the first example may appear to be about 33 per cent and the second, about 50 per cent. However, when properly calculated from a graph these are about 12 per cent and 20 per cent, respectively.

Reports can be standardized and some confusion avoided by use of prothrombin percentage in reports by all laboratories.

---

## Floral Eponym

SHORTIA GALACIFOLIA—GRAY

CHARLES WILKINS SHORT, 1794-1863

THIS plant which Dr. Asa Gray pronounced "perhaps the most interesting plant in North America" has a particularly personal interest for me, since the material that was the basis for this sketch was loaned to me by Mrs. John W. Price, Jr., of Louisville, a great granddaughter of Dr. Short, and I was privileged this Spring to see this rare plant growing in Dr. William T. Sanger's lovely woods garden. Shortia is a genus consisting of two species of low growing evergreen herbs, which are natives of North and South Carolina and of Japan. How this plant was discovered by Asa Gray in the unnamed section of the Michaux herbarium in Paris and how Dr. Gray named it for his friend, Dr. Short, is an interesting story as told by Charles F. Jenkins in the Arnoldia (2:13,1942). André Michaux discovered the plant in the high mountains of North Carolina in December 1788. Dr. Gray searched in vain for a living specimen for more than forty years. It was not until May 1877 that the plant was rediscovered on the banks of the Catawba River near Marion, N. C. Since then it has been found in many places in the western parts of the Carolinas. It usually is found growing on steep banks in the shade of rhododendrons or tall kalmias.

Charles Wilkins Short, a native of Kentucky, graduated from the University of Pennsylvania in 1815, his thesis being "The Virtues of Juniperus Sabina". While a student in Philadelphia, he became the favorite of Caspar Wistar. He first located in Hopkinsville where, as Kelly expressed it, "he gathered patients and plants". In 1828 he and John Esten Cook founded *The Transylvania Journal of Medicine*. Later he was professor of materia medica and medical botany in Transylvania University where Benjamin W. Dudley and Daniel Drake were his colleagues. In 1837 on account of faculty squabbles, he and Drake went to the University of Louisville. Twelve years later he retired to "Hayfield" five miles out of Louisville to enjoy "an elegant leisure" in his herbarium. Short's writings were almost entirely botanical and he carried on an extensive correspondence with botanists on both sides of the Atlantic. According to Kelly *(Some American Medical Botanists)* other plants besides *Shortia galacifolia* were named for him: *Vesicaria Shortia, Phaca Shortia, Astor Shortia,* and *Carex Shortia,* but only the *Astor Shortia* appears in the garden dictionaries and cyclopedias of today.

# THE SUCCESSFUL TREATMENT OF GOLD DERMATITIS WITH BRITISH ANTI-LEWISITE: A CASE REPORT*

LLOYD F. MOSS, M.D.,
and
ELAM C. TOONE, JR., M.D.,
Richmond, Virginia.

It is the opinion in many of the large arthritic clinics of this country that gold therapy judiciously used and combined with general supportive measures offers the best therapeutic approach to rheumatoid arthritis[1,2,3,4].

Because of the high incidence of toxic reactions reported (10% to 45%), there has been a hesitancy on the part of many physicians to employ this useful but potentially dangerous drug. Some of the more serious reactions encountered during gold therapy have been acute yellow atrophy of the liver, agranulocytosis, aplastic anemia, severe exfoliative dermatitis, ulcerative enteritis, and purpura hemorrhagica. Fatal reactions have been reported in as high as 3% of the cases treated but recently under more careful management, this has been reduced to less than .5%[2]. Many types of skin reactions other than exfoliative dermatitis have been reported following gold therapy. These include herpes, leukoplakia, lichen planus, papular eruptions, morbilliform rash, erythema nodosum, and folliculitis[2]. Most of the milder forms of rash have usually disappeared spontaneously within several weeks following the discontinuance of the drug.

Recently there have been reported in the literature several cases of untoward reactions to gold therapy successfully treated with British anti-Lewisite (B.A.L.)[5,6,7,8,9]. This drug was developed during the last war as an antidote to arsenic which was the principal toxic agent of many poisonous gases. It has also been used extensively and successfully in the numerous manifestations of arsenic intoxication arising from other sources such as that encountered in anti-luetic therapy. Further studies have demonstrated its value in acute systemic mercury poisoning[10].

The toxic action of arsenic has been explained by demonstrating that arsenic combines with the sulfhydryl (-SH) compound in the tissues and prevents these compounds from taking part in the essential oxidation and reduction processes of tissue metabolism. British anti-Lewisite was found to have a greater affinity for the arsenic than the sulfhydryl groups and to form with it a more stable compound, thereby releasing the sulfhydryl groups to carry on their vital enzymic action[11].

Because of its successful use in other heavy metal poisoning, British anti-Lewisite was used in gold toxicity and has been successful in the majority of cases so far reported.

The following is a case report of a patient with advanced psoriatic rheumatoid arthritis, who, after showing a good response to gold therapy developed a toxic dermatitis which was treated successfully with British anti-Lewisite (B.A.L.):

## CASE REPORT

This 51 year old white male was admitted to the Veterans Administration Hospital, Richmond, Virginia, on November 1, 1946, complaining of arthritis of 14 years' duration. His history revealed that he was well and working as an auditor until 1932 when he developed pain, swelling, heat, and redness of his left ankle. This subsided spontaneously. Following this, the left knee and ankle became swollen and painful. For the next 12 years the patient had numerous exacerbations and remissions of his arthritis, always involving his left knee and ankle. He was hospitalized on numerous occasions and treated with heat and salicylates. Between attacks, the patient was able to work but noticed increasing stiffness and progressive enlargement of the left knee. In the spring of 1945, the patient developed an infection of the nails of his right hand and right foot. The arthritis of his left knee and ankle became much worse at this time. He was hospitalized and treated for a "fungous infection" of his nails and arthritis. He became progressively worse and by July, 1946, there was involvement of the right knee, both elbows, and the

*From the Medical Service, McGuire Veterans Administration Hospital, Richmond, Virginia, and the Department of Medicine, Medical College of Virginia, Richmond, Virginia.

Published with permission of the Chief Medical Director, Department of Medicine and Surgery, Veterans Administration, who assumes no responsibility for the opinions expressed or conclusions drawn by the authors.

XUM

right shoulder. As the arthritis became worse, there developed oval areas of scaly red rash on both knees, the forehead, and buttocks. The patient lost weight, from 160 to 111 pounds. He then applied for admission to this hospital.

Physical examination on admission revealed a thin, emaciated, pale, poorly nourished white male unable to walk because of severe flexion deformities of the knees and appearing chronically ill. Temperature 100°F, pulse 100 per minute, blood pressure 120/70, and weight 115 pounds. There was a pallor of all mucous membranes. The skin revealed dry, reddish, oval patches covered with whitish, silvery scales located on the forehead, elbows, knees, and both buttocks which were typical of psoriasis. The fingernails and toenails were brittle, very pitted, crumbling, and deformed. Surrounding the nails, the periungual tissue was red, swollen, and pus could be expressed on pressure. Both elbows were slightly swollen, warm, and extension was limited to about 150 degrees. There was only slight discomfort on extreme motions of the wrists but no heat, swelling or deformity. Both knees were very much enlarged, warm, and painful on movement. Motion of the left knee was limited from 85 to 115 degrees and the right knee from 65 to 175 degrees. There was marked muscle atrophy of both the lower and upper extremities and both ankles were moderately enlarged and stiff. Examination of the spine was essentially negative and the chest expansion was two inches. Physical examination of the head, neck, chest, heart, abdomen and the nervous system was negative.

Laboratory—Blood: Hemoglobin 7 gm., red blood cells 2,400,000, white blood cells 7,700, polymorphonuclears 66%, lymphocytes 28%, monocytes 6%. Sedimentation rate 21 mm. Hematocrit 24. The Kahn test was normal. Urinalysis: Clear, amber, albumen negative, sugar negative, 1-3 red blood cells, 3-5 white blood cells, specific gravity 1.015.

X-ray: "Examination of the spine (A-P and lateral views) from the first cervical down to and including the sacrum shows a loss of the normal lordotic curve of the cervical spine. Aside from a moderate degree of osteoporosis of all the bones, no abnormality is noted. Left hand: A marked degree of osteoporosis of all the bones is noted. There is a fusiform swelling of a moderate degree in the region of the proximal interphalangeal joints of all the fingers. Roentgen appearance is that of rheumatoid arthritis. Right hand: Changes such as described in the left hand are present here. Left knee: A moderate degree of osteoporosis of all the bones comprising the joint is noted. A moderate soft tissue swelling is present about the entire joint as well as in the joint proper. There is evidence of erosion of the bone on the lateral and mesial surfaces of the head of the tibia just below its articular surface. An irregular calcific shadow is seen just below the posterior border of the head of the fibula, which is probably within the joint proper. The condyles of the femur show irregularity of all the surfaces as does the patella."

For the first four months of hospitalization, therapy was directed toward improving the nutrition and general well being of the patient. He received a high protein, high caloric, high vitamin diet, supplemental vitamins, iron, crude liver extract, analgesics for discomfort, and a 500 cc. whole blood transfusion once a week. The psoriatic lesions with secondary infection were treated with wet dressings of 1:2000 bichloride of mercury solution and penicillin, 30,000 units every three hours for five days. This was followed by crude coal tar ointment and ultraviolet light. In spite of therapy and correction of the anemia, the arthritis became progressively worse, especially in the hands and wrists. The metacarpophalangeal and proximal interphalangeal joints of both hands became swollen, stiff, hot, and painful. There developed atrophy of the interossei muscles and typical ulna deviation of the fingers and also a pronounced flexion of the distal interphalangeal joints with hyperextension of the proximal interphalangeal joints of the third, fourth, and fifth fingers of the left hand. X-ray showed additional narrowing of the joint spaces and osteoporosis.

On February 28, 1947, sodium aurothiomalate (myochrysine) therapy was initiated. He received 10 mgms. intramuscularly once a week for two weeks. There were no untoward reactions and the dose was increased to 25 mgm. weekly for two additional weeks and then increased to 50 mgm. once a week. A complete blood count, sedimentation rate, and platelet count were done once a week, and a urinalysis twice a week. Transfusions and general supportive therapy were continued. Posterior plaster splints were applied to prevent further flexion

deformity of the knees but because of the severe pain and discomfort caused the patient, this had to be discontinued. Dry heat was given to both knees daily by use of the heat cradle.

There were remissions and exacerbations of all the joints involved but the exacerbations became milder and shorter and the remissions longer. The patient developed a sense of well being and began to get up in a wheel chair and be about the ward. By June, 1947, both knees had become much smaller and appeared quiescent. Physiotherapy, consisting of heat, massage, and passive motion was started. Motion of the right knee increased to 180 degrees and the left knee to about 130 degrees, and pain on motion became much less in the knees and hands. There remained the residual deformity of the hands and feet. The sedimentation rate remained elevated to between 20 and 32 mm. per hour.

Co-existent with the joint improvement, there was a very marked improvement in the psoriasis. At this time, the patient was also receiving "Sas-Par" (Bischoff). The lesions on the forehead, knees, and elbows disappeared. Those on the buttocks became much less and the nails improved to a striking degree.

On August 10, 1947, the patient noticed pruritus of the lower abdomen, inguinal folds, and upper thighs. The next day, a fine maculo-papular rash was noticed starting on the lower abdomen. He had received 890 mgm. of myochrysine and the drug was discontinued at once. By August 15, 1947, the pruritus had become intense and the rash had spread up over the abdomen to the flexor surfaces of both arms and down over the upper thighs. Some papules had developed pustular crusts. British anti-Lewisite (2,3 dimercaptopropanol, B.A.L.), 10% in peanut oil, was given in doses of 150 mgm. four times a day. There was relief from the pruritus and on August 17th, the dose of B.A.L. was reduced to 150 mgm., three times a day. The rash was fading rapidly and on August 18th, the dose of B.A.L. was reduced to 150 mgm. twice a day. On August 19th, there was an exacerbation of the rash at the original sites and it spread also to both axillae and pectoral folds, across the chest and down the thighs. The pruritus again became intense. The dose of B.A.L. was increased to 150 mgm. three times a day for eight days. The pruritus ceased and the rash gradually faded, completely disappearing on August 30th, 20 days after the onset and 15 days after beginning therapy with B.A.L. There has been no recurrence since the drug was discontinued.

While receiving the B.A.L., the patient complained of anorexia and a bad taste in his mouth and there was an odor of the drug on his breath and body. No other reactions were noticed and these all disappeared promptly when the B.A.L. was stopped.

About five days after the B.A.L. was discontinued, there was an exacerbation of pain, swelling, and heat of both knees and both wrists. Concomitantly with the exacerbation of joint involvement. there was a recurrence of the psoriatic lesions on the left knee and palms of the hands.

## COMMENT

Statistics have shown that the association of the psoriasis and rheumatoid arthritis is of real significance and more than a chance occurrence. Dawson[12] reported an incidence of 2.6% in 1,000 cases of rheumatoid arthritis as compared with a much less incidence in a large number of cases of osteoarthritis. Bauer[13] reported 2.7% of his patients with rheumatoid arthritis had psoriasis as compared to .7% in a similar number of controls.

Whether there is some factor of common etiology is a matter of conjecture, since the etiology of both diseases is unknown.

This case followed the pattern of many other cases reported in that the exacerbation of the arthritis was accompanied by exacerbation of the psoriatic lesions and as the joint manifestations improved under therapy, the psoriasis improved also.

The rapid fading of the toxic dermatitis under B.A.L. therapy is very encouraging. This case and other reported cases suggest that this drug has definite value as an antidote in this and other heavy metal poisoning.

## SUMMARY

1() A case of toxic dermatitis from gold is presented which was treated successfully with British anti-Lewisite (B.A.L.).

## BIBLIOGRAPHY

1. Cecil, R. L.: Gold Salts; Problem of Dosage, *M. Clin. North America* **30**:545-552 (May), 1946.
2. Comroe, B. I.: The Use and Abuse of Gold Therapy in Rheumatoid Arthritis, *J.A.M.A.* **128**: No. 12, 848-851 (July 21), 1945.
3. Cohen, A.; Goldman, J.; and Dubbs, A. W.: The Treatment of Rheumatoid Arthritis with 417 Courses of Gold, *New Eng. Journal of Med.* **223**: 199-203 (August 16), 1945.

XUM

4. Price, A. E., and Leichtentritt, B.: Gold Therapy in Rheumatoid Arthritis, *Ann. Int. Med.* **19**:70-80 (July), 1943.
5. Cohen, A.; Goldman, J.; and Dubbs, A. W.: The Treatment of Acute Gold and Arsenic Poisoning, *J.A.M.A.* **133**: No. 11, 749 (March 15), 1947.
6. Ragan, C., and Boots, R. H.: The Treatment of Gold Dermatitides, *J.A.M.A.* **133**: No. 11, 752 (March 15), 1947.
7. Lockie, L. M.; Norcross, B. M.; and George, C. W.: Treatment of Two Reactions Due to Gold, *J.A.M.A.* **133**: No. 11, 754 (March 15), 1947.
8. Davison, R.: B.A.L. Therapy of Dermatitis Caused by Injections of Gold Salts, *Stanford Med. Bull.* **5**: No. 1, 37 (February), 1947.
9. Margolis, H. M., and Caplan, Paul S.: B.A.L. in the Treatment of Toxicity from Gold, *Ann. Int. Med.* **27**:353-360 (September), 1947.
10. Longcope, W. T., and others: The Treatment of Acute Mercurial Poisoning by B.A.L., *Journal of Clinical Investigation* **25**:557 (July), 1946.
11. Therapeutic Use of B.A.L., Symposium International Medical Digest **51**:179-184 (September), 1947.
12. Dawson, M. H., and Tyson, L. T.: Psoriasis Arthropathica, *Trans. of Amer. Assoc. of Phys.* **53**:303-308 (May), 1938.
13. Bauer, W.; Bennett, G. A.; and Zeller, J. W.: The Pathology of Joint Lesions in Patients with Psoriasis and Arthritis, **56**:349-352 (May), 1941.

---

## Women Past 49 Respond Best To Treatment For Cancer of Cervix.

Drs. Harry H. Bowing and Robert E. Fricke of the Mayo Clinic, in July 10 issue of *J.A.M.A.*, state that women past 49 respond more favorably to treatment for cancer of the cervix than do younger women, based on a study made of 3,798 patients at the clinic from 1915 through 1944.

Women 49 or older responded better to all types of treatment, except that younger women were more able to withstand the effects of surgery.

Twenty-nine per cent of the women between the ages of 30 and 49 who were treated before 1940 and who were traced by the physicians were living five or more years after leaving the hospital, while in the 40 to 69 group, nearly 37 per cent were living five or more years after leaving the hospital.

The importance of early treatment, systematic examination after treatment, individualized therapy, and the harmful effects of treatment by inadequate methods were also emphasized in the study. Seven types of treatment were used, the type being determined by the stage of the disease, the patient's condition and previous treatment, and other factors: (1) Radium therapy (2) Roentgen therapy (3) Surgery (4) Surgery, radium therapy, and roentgen therapy (5) Combined radium therapy and roentgen therapy (6) Surgery and radium therapy, and (7) Surgery and roentgen therapy.

Combined methods are often more successful than any method used alone, the study points out.

The importance of early treatment is shown by the fact that among the patients at the clinic from 1915 through 1939, 65 per cent of those treated in an early stage of the disease and who were traced by the physicians were living five years after leaving the clinic.

## Joseph Lister and Socialized Medicine.

Following the introduction of the National Health Service in Scotland in 1865, Joseph Lister was excluded from the government employment because "the Minister of Health had been fully informed . . . that the use of carbolic acid, since it prevented the formation of laudable pus, was inimical to the patient. . . . The Minister of Health then rose to say that he was proposing to introduce regulations making the use of carbolic acid and similar substances, loosely described by Mr. Lister as 'antiseptics' (whatever that might mean), illegal . . .". *(Watts, J. C. British Medical Journal, page 313 February 14, 1948.)*

# SMALL BOWEL TUMORS*

RICHARD E. BOWER, M.D.,
and
GEORGE D. VERMILYA, M.D., F.A.C.S.
Diplomate American Board of Surgery,
Richlands, Virginia.

In reviewing the literature, and standard texts of Surgery and Pathology, it soon becomes apparent that small bowel tumors have been neglected. This is surprising when it is considered how many different types of tissue make up the structure of the bowel wall, and hence the variety of tumors which may be present. Baker and Halley[1] list as the commonest lesions the following: lipomas, adenomas, hemangiomas, pancreatic rests, cysts, and fibromas, the rarest of which are the latter. Botsford and Seibel's series[2] discloses that adenocarcinomas are the more common, especially so in the upper reaches of the intestinal tract. Argentaffinomas (carcinoids) were second and lymphosarcoma third in number. According to their series, benign tumors produced symptoms much less frequently than did malignant. Whether malignant tumors are more prevalent than benign seems to vary from clinic to clinic. Of 813 tumors of the entire gastro-intestinal tract at the Army Institute of Pathology, 54 involved the small bowel. Nine were carcinoma, two were sarcoma, and the remainder were benign.[5]

The literature reveals that small bowel tumors vary from 1 to 3% of all tumors of the gastro-intestinal tract. It has been conjectured that many exist symptomless which may account for their rarity. Tumors may occur anywhere in the circumference of the bowel. Pedunculated tumors are more apt to cause intussusception. Natural processes may amputate the tumor, and cause obstruction at a lower level.

All tumors of the intestinal tract are found in the search for melena or intussusception, or their discovery is accidental. The presence of melena depends on the vascularity of the tumor, whether mucosal changes have been effected, as a result of necrosis or ulceration, or with ischemic necrosis of the tumor.

Iason[3] states, of all the intussusception found, that in adults is only about 5%. It may occur anywhere from the stomach to the rectum, although the large bowel is more commonly involved, as neoplasms occur more commonly at that site. He states further that in adults symptoms are vague and those of mild obstruction predominate. Differentiation from peptic ulcer may be difficult and Iason states that the diagnosis is usually made surgically.

Botsford and Seibel[2] in their paper present methods of x-ray diagnosis. This depends on early barium contrast studies. They illustrate intussusception of the ileum into the cæcum by barium enema. They also list two techniques whereby the small bowel may be studied. One method consists of taking films at thirty minute intervals following the ingestion of the barium meal until it clears the small intestine. The other method is the passage of a Miller-Abbott tube and the introduction of a thin barium mixture at various stages of its descent. They mention the difficulty of revealing benign tumors due to the overlap of succeeding loops of bowel; however, the associated intussusception may be discovered.

Treatment is, of course, surgical, following adequate preparation of the patient with transfusions, and infusions depending on the condition of the patient. Iason (*ibid*) states that palliative treatment of intussusception should be reserved for children.

We recently had a patient whose symptoms were rather characteristic, but who was much more obstructed than her examination would have led us to believe. She was a thirty-eight year old, unmarried white female who complained of rectal bleeding of one week's duration, associated with periumbilical pain. Bowel habits were normal except for the bleeding. She had vomited twice in the week preceding admission. The blood in the stools was described as dark in color.

The patient had had a barium enema two years previously and it revealed a mild colitis. She also had had surgery for "locked bowels" but other de-

*From the Clinch Valley Clinic, Richlands, Va.

XUM

tails were lacking as the surgery was done elsewhere. System review was negative.

Examination revealed a well developed and nourished white female who was not acutely ill. Blood pressure was 120/68, pulse 104, temperature was 99. Physical examination was essentially negative except for the following findings: there was lower abdominal tenderness without rigidity. No masses could be felt and the bowel sounds were normal. Pelvic examination revealed a mass in the right adnexa but it was vague in outline. Sigmoidoscopic examination was normal, except for bloody stool. A flat plate of the abdomen was negative and barium enema revealed a moderate colitis of the descending colon and sigmoid.

Blood count, urinalysis, and serology were normal. Hemoglobin was 52%.

The patient was prepared for surgery and a laparotomy was done. There were several loops of bowel adherent to the old scar. The uterus was found to contain a fibroid on the right side. In the lower ileum, a fibromyoma was found and it protruded from the outer layer of an intussusception. Within the intussusception, more masses could be felt. It was decided to do a resection, the intussusception was removed and the continuity of the bowel re-established by an end-to-end anastomosis.

Figures 1 and 2 show the tumors. The pathologist reported a 12 cm. segment of bowel which contained three rounded masses which bulged into the lumen stretching but not breaking the mucosa. Cut surfaces presented a glistening appearance. Part was white and striated and some areas of brown were thought to represent old hemorrhage. The largest of the masses was three centimeters in diameter. The smallest was one-and-one-half.

Microscopic examination revealed that the outer layer of muscle was apparently replaced by fibrils with just here and there a nucleus. There was considerable interstitial hemorrhage, and the mucosa was normal. Diagnosis: fibro-myoma of the ileum.

The post-operative course was smooth. A Miller-Abott tube was started with Wangensteen drainage. Twenty cubic centimeters of mercury were placed in the balloon to hasten its descent. On the second post-operative day, the temperature spiked to 101.8 and the patient was placed on a gram of streptomycin daily until the temperature returned to normal. The tube was clamped on the fourth day and removed on the fifth. The patient was ambulatory on the fifth day and discharged on the seventh day. She was seen six weeks after surgery and again in four months and she was symptom free.

We are frank to admit that the possibility of a small bowel tumor was only vaguely considered, and still, upon reviewing the history, the symptoms presented were rather characteristic. This case falls into the vast majority of small bowel tumors in which the diagnosis is made on the operating table.

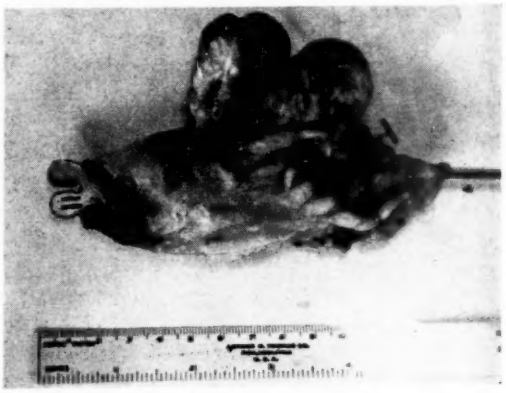


Fig. 1. Specimen of resected bowel showing tumors after fixation and inversion of the bowel.

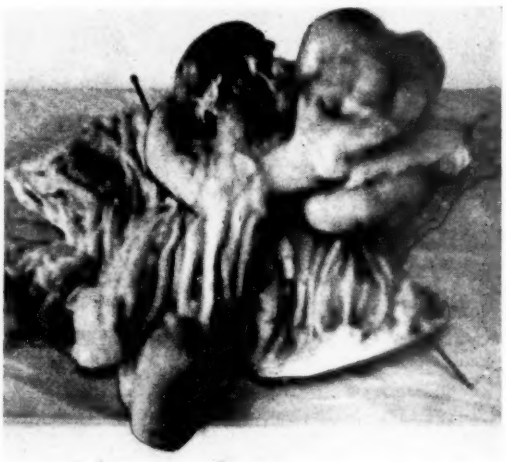


Fig. 2. Bowel split longitudinally to reveal sources of the tumors.

We were puzzled upon opening the peritoneum that so much obstruction was present with such mild pain. Of course, it is possible that obstruction occurred shortly before surgery. Exploration of the entire gastro-intestinal tract failed to reveal any

other pathology and still, in the course of a few inches, there were three tumors large in size. We believe it possible that the patient's obstruction five years previously could have been from tumor but we are unable to secure the records.

SUMMARY

1.—Tumors of the small bowel constitute from 1-3% of all tumors of the gastro-intestinal tract.

2.—Melena and obstruction are the most prominent symptoms. Diagnosis is usually surgical.

3.—A case is presented in which there were three tumors in the space of a few centimeters.

BIBLIOGRAPHY

1. Baker, H. L., and Halley, H.: *Ann. Surg.* 1946, **123**: 1067.
2. Botsford, T. W., and Seibel, R. E.: *N. Eng. J. Med.* May 8, 1947, **236**:683.
3. Ehrlich, J. C., and Hunter, O. B.: *Surg., Gyn. and Obst.* 1947, **85**:98-106.
4. Iason: *Surgery* 1945, **18**:457.
5. Maurot, A. J., and Watkins, C. H.: *Am. J. of Surg.* 1947, **73**:385.

---

**Club Foot in Children.**

A new technic of treating club foot with a cohesive bandage gives most babies born with the deformity a normal foot, says Emil D. W. Hauser, M.D., of Chicago.

Writing in the September 4 issue of *The Journal of the American Medical Association,* Dr. Hauser points out that treatment with the bandage, which will not adhere to or irritate the skin, can be begun immediately after birth.

The earlier treatment of clubfoot is begun, the better the correction that will be obtained, he emphasizes, as the younger the child the more rapid is growth and the softer and more easily changed are structures of the foot. With former methods, such as the use of plaster casts and splints, treatment could not be begun until a baby was from one to three months of age, he says.

The entire foot and leg are covered with the cohesive bandage and a reinforcement of adhesive tape to hold the foot in as nearly a normal position as is possible.

"The interval between changes of bandage is variable, depending on the age at which the correction is started and the severity of the deformity," says Dr. Hauser.

For the newborn baby the bandage is reinforced daily and changed once a week, with more correction at each treatment. Since the deformity is corrected rapidly at an early age, it is important for parents to realize the necessity of continuing treatment until the child walks, according to Dr. Hauser. If treatment is stopped too soon, the deformity may reoccur, he says.

Although in some cases a tight tendon in the foot will not allow a full correction with the bandage alone, the tendon can be lengthened by surgery, he indicates. In only a few cases does the child fail to develop a normal foot.

XUM

# UNICAMERAL CYST OF THE CALCANEUS

ROBERT G. DUNN, JR. M.D.,
Department of Radiology, Medical College of Virginia,
Richmond, Virginia.

Cystic lesions of the long bones, either single or multiple, are relatively common, but solitary cyst of the calcaneus is a rare lesion. Up to the present time, only 16 cases have been recorded in the medical literature. In 1930, Smith[10] reported a single case which he considered to be a localized osteitis fibrosa or the result of a structural defect of the bone. Four cases were recorded by Fitte and Mulcahy[5] in 1939. One proven case each was contributed by Sobel[11] and Beclere,[1] in 1936, with Caritat[3] adding another case in 1941. McLachlin[9] in 1943 lists a single case of solitary cyst of the os calcis in an eight year old girl. A solitary cyst of the calcaneus is illustrated by Brailsford.[2] Copleman, Vidoli, and Crimmings,[4] together, reported three cases in 1946, and Janes[8] added another case, the same year. Two cases were reported by Trivelli[12] in 1947.

It is the impression of Copleman, Vidoli, and Crimmings[3] that these cysts are the same as the solitary cysts seen in the long bones, both grossly and microscopically. The pathogenesis of solitary

Figure 1. Case 1

cyst of the bone is debatable. Geschickter and Copeland[6] believe that the solitary bone cyst is a localized osteitis fibrosa or the healing of a giant cell tumor. This view is not held by Jaffe and Lichtenstein,[7] who agree with Mikulicz, and think that this is a disease entity with no relationship to any other condition. It is their belief that the solitary bone cyst is the result of a localized disturbance of bone growth with resulting cyst formation. Copleman, Vidoli, and Crimmings[3] support this view and think that stress or trauma may contribute to the disturbance of bone growth. The

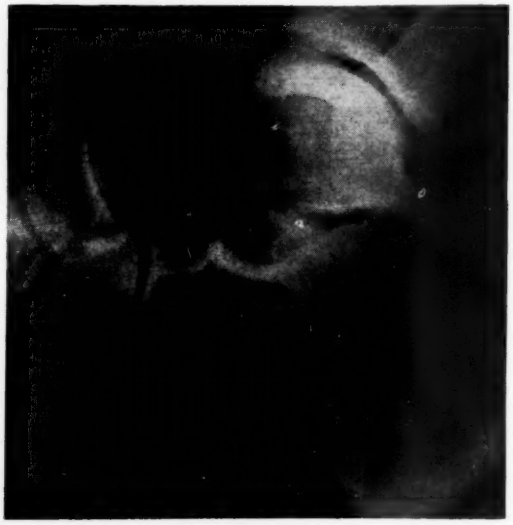


Figure 2. Case 2

lesion is benign, and no reports of malignant degeneration are found in the literature.

The clinical signs and symptoms are not prominent. There may be localized pain and tenderness with a resulting limp on walking or there may be no symptoms, as in case one. This condition is most frequent in the early years of life, being seen most frequently in the first three decades. The lesion is most often in males with only three reported cases in females.

The roentgenologic findings are rather typical, so much so that Copleman, Vidoli, and Crimmings[3] state: "that once recognized, they seem to make operative proof unnecessary for the acceptance of the diagnosis." A triangular area of radiolucency is seen in the anterior portion of the os calcis. Frequently a multilocular appearance is noted and fine

trabeculations may be seen crossing the cyst. There is lateral expansion of the cortex which remains intact, as in the solitary cyst of the long bones. No periosteal changes are present, and there is no destruction of the bone.

Treatment consists of curettage and packing with bone chips. None of the cases seen or reported were treated by radiation. It is unlikely that this type of therapy would be of value. Jaffe and Lichtenstein[7] noted no benefit in radiation of cysts of the long bones.

The two cases below were recently seen at this hospital.

*Case I*: A 40 year old white male was seen in the emergency room of the Medical College of Virginia Hospital complaining of pain in the ankle, following a fall at home a short time before. There was swelling and deformity of the right ankle and the clinical diagnosis of simple fracture of the fibula was made. A roentgenogram at this time revealed an oblique fracture of the external malleolus and a fracture of the posterior end of the tibia, with the incidental finding of a cystic area of the anterior portion of the calcaneus which measured 1.3 cms. in diameter. There was no previous history of symptoms or injury.

*Case II*: A 35 year old white male was seen in the emergency room of this hospital with the complaint of pain in the left heel. His symptoms had been present for about two weeks. Physical examination was essentially negative and there was no swelling, ecchymosis, or particular pain on motion of the left foot. A roentgenogram revealed a somewhat multilocular, cystic lesion located in the anterior portion of the calcaneus measuring 2.3 x 3.9 cms. The patient refused further treatment and was discharged.

## SUMMARY AND CONCLUSIONS

1. Solitary cyst of the calcaneus is a rare condition, with sixteen cases reported. Two more cases have been added. Clinical signs and symptoms may or may not be present.

2. A triangular area of radiolucency in the anterior portion of the calcaneus with no bone destructive changes should suggest the unicameral cyst.

## REFERENCES

1. Beclere: Quoted by Caritat.[3]
2. Brailsford, J. F.: Radiology of the Bones and Joints. Baltimore, Wm. Wood and Co., 2nd ed., 1935.
3. Caritat, R. J.: Formacione quisticas del calcaneo. *Arch. uruguayos de med., cir y especialid* **18**:41-47, 1941.
4. Copleman, B., Vidoli, M. F., and Crimmings, F. J.: Solitary Cyst of the Calcaneus. *Radiology* **47**:142-148, 1946.
5. Fitte, M. J., and Mulcahy, J.: Formaciones quisticas del calcaneo. *Bol y trab Soc. de cir. de Buenos Aires* **23**:705-711, 1939.
6. Geschickter, C. F., and Copeland, M. M.: Tumors of Bone. New York, *Am. J. of Cancer,* Rev. ed., 1936.
7. Jaffe, H. L., and Lichtenstein, L.: Solitary Unicameral Bone Cyst, With Emphasis on Roentgen Picture, Pathologic Picture, and Pathogenesis. *Arch. Surg.* **44**:1004-1025, 1942.
8. Janes, J. M.: Localized Bone Cyst of the Os Calcis. *J. Bone and Joint Surg.* **44**:182, 1946.
9. McLachlin, A. D.: Treatment and Results in Localized Osteitis Fibrosa Cystica (The Solitary Bone Cyst). *J. Bone and Joint Surg.* **41**:777-790, 1943.
10. Smith, N. R.: Cyst of the Os Calcis. *J. Bone and Joint Surg.* **28**:416, 1930.
11. Sobel: Quoted by Caritat.[3]
12. Trivelli, L.: Cisti Ossee Nel Calcagno. *Minerva Medica* **1**:170-173, 1947.

XUM

# CYANOSIS IN INFANTS FROM POLLUTED WELL WATER*

EDWIN A. HARPER, M.D.,
Lynchburg, Virginia.

The discovery that well water, even though boiled, may be toxic for young infants was first made by Comly[1] in 1945. He reported two cases of his own and nineteen observed by others in whom the ingestion of polluted well water caused cyanosis and listlessness. In his first case the cyanosis had previously been shown to be due to methemoglobinemia; a peculiar gaseous poison arising from a defective oil burner was suspected. Comly's contribution consisted in showing that the methemoglobinemia was due to the use in the formula of well water which contained 619 mg. per liter of nitrate ion.

The November, 1946, issue of the *Journal of Pediatrics* contains two articles reporting further instances of cyanosis in infants from the use of well water in their formulae. One article is by Ferrant[2], of Louvain, Belgium, and the other by Faucett and Miller[3], of Kansas City.

Methemoglobin is a changed form of hemoglobin in which the capacity for transporting oxygen to the tissues is blocked by an OH group. This chemical change is brought about in many different ways; poisoning with aniline, nitrophenol, sulfanilamide, potassium chlorate are all well known agents in its production. The ingestion of nitrates has also been known to produce methemoglobinemia. The nitrate is apparently reduced to nitrite in the bowel and is absorbed in this form. Cyanosis has followed the use of bismuth subnitrate in the treatment of diarrhea or as a contrast medium in gastro-intestinal radiology. Ferrant calculates that the quantity of nitrate ion ingested in reported cases of poisoning from bismuth subnitrate is of the same order of magnitude as the nitrate ion ingested in the reported cases of cyanosis from well water.

Ordinary clinical cyanosis such as one sees in cardiac and pulmonary disease is due to the presence of reduced hemoglobin in the circulating blood. If the disease is such that it permits the administration of high concentrations of oxygen, the latter corrects the cyanosis. In contrast, the cyanosis due to methemoglobin is not improved by oxygen, and, as Comly states, it gives the skin an unusual brown-gray color, noticeably different from the color of reduced hemoglobin. Everyone is familiar with the cherry red color of the lips in asphyxiation with carbon monoxide; this is the color of still another form of hemoglobin—carboxyhemoglobin.

In the seven cases of cyanosis from well water which were personally studied by the three authors quoted the ages of the infants ranged from two to six weeks. The well water used in Comly's first case contained 619 mg. of nitrate ion and 0.4 mg. of nitrite ion per liter, and in his second case 388 mg. of nitrate and 1.3 mg. of nitrite. In Ferrant's cases the nitrate concentrations were 497 and 180 mg. per liter. Faucett and Miller found 310 and 1329 mg. per liter. A survey of 2000 Iowa wells in 1934 and 1935 revealed a nitrate ion content which varied from zero to 554. Comly suggests as an upper limit of safety 44, or, at most, 88 milligrams per liter of nitrate ion.

The nitrate appears in well water as the result of the disintegration by bacterial action of organic matter of plant or animal origin—not necessarily from sewage.

It is interesting that adults who drink this same water do not exhibit cyanosis or other untoward effects. In a few of these cases the blood of the parents was tested and found to contain not more than the physiological maximum of methemoglobin—about 1 per cent of total hemoglobin. Comly suggests that infants are more susceptible because their intestinal mucosa is more delicate and allows a more ready passage of nitrate ions; also, they may have more nitrite producing bacteria in their intestinal flora. It is, of course, a fact that infants have a much greater fluid intake in proportion to total body weight than adults. Thus a formula made largely of polluted well water would contain much more nitrate in proportion to the amount of circulating hemoglobin than would be the case with an adult. In the cases so far reported the infants have all suffered from some gastro-intestinal disturbance, mild or severe, at the time the cyanosis occurred. Possibly this disturbance damaged the mucosa of the intestine sufficiently to permit the passage of the nitrite ions.

Once recognized, the treatment of this condition

Read before the Staff Meeting of the Baptist Hospital, Lynchburg, November, 1947.

*From the Pediatric Service of the Virginia Baptist Hospital.

is fortunately simple. A change of water in the formula, alone, may be all that is necessary. Following this change, the methemoglobin is converted to normal hemoglobin in from one to four days by physiological processes. Hartmann[4] in 1938, and later Wendell[5], standardized the use of intravenous methylene blue in reversing methemoglobinemia. The drug is given in a dose of 1 to 2 mg. per kilo of body weight. It is rapidly effective. In their second case Faucett and Miller found a methemoglobin of 9.2 gm. per 100 cc. of blood and a total hemoglobin of 13.5 gm. per 100 cc., thus leaving 4.3 gm. of functioning hemoglobin per 100 cc. of whole blood. Twenty minutes after the intravenous injection of 0.6 cc. of 1% methylene blue the baby's color was normal. In thirty minutes the methemoglobin concentration had fallen to 0.7 gm. per 100 cc.

*Case Report.*—S. J., a five weeks old white female infant was admitted to the Virginia Baptist Hospital at 8 P.M. on November 3, 1946, with the complaint of blue spells for two days.

She was born, her mother's first child, on September 26, 1946, at Cairo, Illinois, after a long and difficult labor. An episiotomy was done and forceps were used, leaving marks that were still visible. Following birth she behaved normally, with no cyanosis, jaundice, bleeding or convulsions. The birth weight was 8 lbs., 3 ozs. She was fed a formula of SMA and boiled water.

At the age of one month she was brought East for a visit, arriving in Clover, Virginia, on October 30. Three days after arrival, on November 2, she alarmed her parents greatly by becoming quite blue. Within a few hours the degree of blueness became less. She was still somewhat blue on the following morning. Later in the day she became very blue and was seen by Dr. James Hagood who was unable to find a cause for the cyanosis. There had been no fever, choking spell, nasal discharge, cough, nor diarrhea. She continued to nurse well, but occasionally spit up or vomited a small amount of milk.

Examination on admission showed an active, well-developed and nourished infant with generalized cyanosis of a moderate degree. The admitting nurse was shocked at the deep blue color and felt certain that the baby was critically ill. Close observation showed no signs of distress, however. Respiration was regular, not unduly rapid, and not labored. The pulse was regular with a rate of 120. The baby was alert and appeared to notice her surroundings.

The fontanel was soft. Eye movements and pupillary reactions were normal. The nose, ears, and throat were free of any evidence of infection. The chest was well formed and there was a normal note of resonance over the lung fields. No rales or bronchial breathing could be heard. The heart was not enlarged to percussion and there were no murmurs. The abdomen was soft, easily palpated and revealed no enlarged organs nor abnormal masses. Genitalia and extremities were normal.

Since no obvious physical cause for the cyanosis could be found, the ingestion of poison was suspected. Careful questioning of the mother and grandparents uncovered no source of poison. The baby had not received any drug, nor, indeed, any food except the SMA and boiled water. She had taken this same formula since birth. At this point the article by Comly was recalled and the grandfather was asked about the quality of water used. He admitted readily that the well was obviously contaminated. It was located near a barn and was often muddied by the inflow of dirty surface water. This water was used simply because there was no nearer source of good water. He stated that all water for drinking, and, of course, the water used for the baby's formula, was boiled before using. No one had ever suffered any ill effects from using the water.

After this description of the source of the water, methemoglobinemia was considered the most likely reason for the cyanosis. An attempt was made to find methylene blue for injection but none was available in town†. Also it was found that the necessary reagents were not on hand for measuring the degree of methemoglobinemia. Oxygen was administered for a few minutes but no change was noted in the degree of cyanosis. Therefore, the baby was given a formula of evaporated milk and water.

On the following day the cyanosis was noticeably less and the baby still showed no distress. A roentgenogram of the heart and lungs showed no enlargement of the heart and perfectly clear lung fields.

Blood studies on the same day, November 4th, showed a hemoglobin of 78% (Sahli), a red count of 3,580,000, and a white count of 10,300. A smear

†At the present time no pharmaceutical firm supplies methylene blue solution in ampoules. Such a solution can be readily prepared by weighing 1 gram of U.S.P. XII methylene blue on a sheet of clean filter paper and adding it to 100 c.c. of freshly boiled and partially cooled distilled water.

XUM

showed normal platelets, 39% PMN's and 61% small lymphocytes.

Two days after entry, November 5th, the cyanosis had practically disappeared. The family was well satisfied with the explanation of the cyanosis as due to the dirty well water and were anxious to take the baby home. She was sent home on the same evaporated milk formula to which water from a neighbor's well was to be added. A follow-up call in one week revealed no further trouble.

In April, 1947, the mother wrote to say that the baby had had no further blue spells and had grown and developed well.

A week after leaving the hospital the grandfather sent a sample of the well water to the Virginia State Department of Health for analysis. By error this sample was thrown out. Because the family moved about in the meantime, no further sample could be obtained until April, 1947. At that time the Laboratory of the Department of Health found the nitrate content to be 266 mg. per liter. This figure indicates gross contamination of the well water. It is unfortunate that this water anaylsis was not made at the time of the baby's illness. However, in the meantime, no attempt had been made to clean the well, so that the analysis is probably pertinent.

## SUMMARY

The use of contaminated well water containing from 70 to 619 mg. per liter of nitrate ion is capable of causing a severe cyanosis in young infants when used in their formulae.

A case is reported of cyanosis in a five weeks old infant which was probably due to nitrate in polluted well water.

## ADDENDUM

Since the above was submitted for publication in January, 1948, a new study of the problem has appeared in the literature: Cornblath, Marvin, and Hartmann, Alexis F., "Methemoglobinemia in Young Infants", *Journal of Pediatrics:* 33:421, October 1948. These authors show that the ingestion of nitrate will cause methemoglobinemia in only those infants who have a low acidity of the gastric juice, (a pH higher than 4.0). The low acidity permits the growth of several organisms which are capable of reducing nitrate to nitrite in the upper gastro-intestinal tract. The absorption of this nitrite by the blood stream then produces the methemoglobinemia and cyanosis. The normally high values of gastric acidity in adults explain why they never exhibit cyanosis from drinking water with a higher nitrate content. Such nitrate is absorbed in the upper portion of the gastro-intestinal tract before it has come in contact with the bacteria present in the lower bowel.

## REFERENCES

1. Comly, Hunter H.: Cyanosis from Nitrates in Well Water. *J.A.M.A.* **129**:112, 1945.
2. Ferrant, Maurice: Methemoglobinemia. *Jour. Ped.* **29**:585, 1946.
3. Faucett, Robert L., and Miller, Herbert C.: Methemoglobinemia Occurring in Infants Fed Milk Diluted with Well Water of High Nitrate Content. *Jour. Ped.* **29**:593, 1946.
4. Hartmann, A. F., Perley, A. M., and Barrett, H. L.: A Study of Some of the Physiological Effects of Sulfanilamide: II. Methemoglobin Formation and Its Control. *J. Clin. Invest.* **17**:699, 1938.
5. Wendel, W. B.: The Control of Methemoglobinemia with Methylene Blue. *J. Clin. Invest.* **18**:179, 1939.

# A CASE OF PREGNANCY COMPLICATED BY A UTERUS DIDELPHYS

GORDON W. JONES, M.D.,
Fredericksburg, Virginia.

Congenital anomalies due to improper fusion of the Muellerian ducts are relatively uncommon complications of pregnancy. Extreme forms of the anomaly are found only once in 1500 deliveries[1]. Despite this scarcity, a goodly number is to be anticipated yearly in large populations. For instance, fifty annually might be expected in Virginia. Because of this fact and because a majority of the recently reported cases have come to operation[2], a case recently handled successfully from below was thought worth reporting.

## CASE REPORT

Mrs. E. W., age 26, white, primigravida, EDC October 21, 1946, was first seen prenatally at 6 months with a moderately severe pyelitis of pregnancy. This was successfully treated with sulfa-drugs. Pelvic examination at this time revealed two equal-sized vaginas separated by a fairly thick septum. In the vault of each vagina was a normal-appearing cervix. Abdomino-pelvic palpation revealed a mass the size of a fist to the left of the pregnant uterus. This "left" uterus gave no evidence of incarceration.

The pelvic measurements taken at this time were: Intercristal 27 cm., interspinous 23 cm., external conjugate 19, diagonal conjugate 12½ cm., bisischial 10 cm. Her blood pressure was 114/74; weight 134.

The prenatal course was uneventful except for a slight tendency to edema which was controlled by diet and epsom salts, and a moderately increased blood pressure which was controlled by rest and mild sedation.

On January 13, 1947, she fell into active labor. When first seen in the hospital, the cervix was 4 cm. dilated, the head was at the spines, and there was no evidence of incarceration of the non-pregnant uterus. Under excellent demerol-scopolamine analgesia, labor progressed rapidly to full dilatation 2 hours later, making the total duration of the first stage 5 hours, 45 minutes. The head descended rapidly and the patient was taken to the delivery room, where, under ether anesthesia, after a fleshy median vaginal band was cut and an episiotomy done, the baby was delivered easily by low forceps. Duration of second stage: 28 minutes. The placenta was delivered by expression 17 minutes later. Blood loss estimated at 150 cc. The postpartum course was afebrile.

Examinations at delivery, at 6 weeks, and at 6 months revealed that the septum between the cervices and vaginas had been destroyed by the passage of the baby, so that now, to casual observation there is no suggestion of a uterus didelphys. Interestingly enough, destruction of these apparently thick septa resulted in no complications. Bleeding from torn surfaces was negligible.

## DISCUSSION

It is generally agreed that, in the absence of other complications, every woman with double uterus and vagina deserves at least a conscientious trial of labor. According to Taylor[3], incarceration of the non-pregnant horn with a breech at term is the only absolute indication for section referable to the anomaly alone. Nevertheless, relatively few reported cases are delivered vaginally. One writer records 11 operative deliveries out of 15 cases, most of these being sections[4].

It is thus obviously true that these cases have an increased tendency to complications. The abortion rate is high, 53% in one series[5]. Premature labors also are frequent. And when the pregnancy goes to term there are a number of other possibilities. Uterine inertia, prolonged labor, and even rupture of the uterus due to faulty arrangement of the muscle fibers, while not as frequent as one might expect, are possibilities. Incarceration of the non-pregnant horn and abnormal presentations account for other operative deliveries. Of equal importance is the possibility that there may be a contracted pelvis associated with the defective development of the generative tract. The resultant cephalo-pelvic disproportion accounts in large measure for the high incidence of cesarean sections. Among cases delivered vaginally, retention of the placenta is common —in as many as 37.9% of the cases in Smith's series.

The present case presents a striking contrast to

all these dire possibilities. The pelvis was more than ample, there was no threat of abortion, the non-pregnant uterus presented no difficulties. Labor itself was well nigh precipitous, and the placenta was secured readily. The torn septa showed no tendency to bleed upon inspection after delivery. The lesson is obvious. Such cases merit thorough study, frequent prenatal visits, and in the absence of complications outside the generative tract, deserve a trial with conservative treatment.

SUMMARY

1. A case of pregnancy in a uterus didelphys managed conservatively with marked ease is presented.

2. The possible complications are briefly reviewed.

3. It is concluded that the average case deserves a trial with conservative treatment.

BIBLIOGRAPHY

1. Smith, F. R.: *A. J. Ob. and Gyn.* **22**:714, 1931.
2. Hoffman, E. S.: *A. J. Ob. and Gyn.* **51**:692, 1946.
Klein, Joseph: *A. J. Ob. and Gyn.* **53**:321, 1947.
3. Taylor, H. C.: *A. J. Ob. and Gyn.* **46**:388, 1943.
4. Falls, F. H.: *A. J. Ob. and Gyn.* **15**:399, 1928.
5. Schauffler, G. C.: *J.A.M.A.* **117**:1516, 1941.

*Professional Building.*

---

## Impressionistic Medical Art.

A new type of impressionistic medical art, created for Winthrop-Stearns Inc., pharmaceutical manufacturer, by John Arnold, Viennese artist now in New York, is attracting widespread attention among physicians and scientists.

The idea is to form the profile of a human head using a variety of objects either symbolic of the condition to be treated, or of the plants, animal tissues, or human organisms involved in the medication.

In one painting, entitled "Fruits, Vegetables and Vitamins", Arnold has assembled oranges, grapes, onions, garlic, tomatoes, beets, peas and other vitamin-rich fresh fruits and green vegetables to form a feminine face. To portray the protein values in fish and meats as obtained in amino acid preparations, a man's head with a goatee cleverly emerges from an array of raw steak, chops, frankfurters, lobsters and several different kinds of fish.

The beauties of spring and the pleasures of summer are often marred for many a patient suffering the discomforts of hay fever, and Arnold has created a woman's features from a variety of botanical species, flowers and grasses, many of which cause allergic reactions.

Described as "gruesome, but humorous", another Arnold oil painting depicts a head composed entirely of detailed colored drawings of human internal organs: intestines, lungs, brain, heart, kidney and gallbladder among others. This is the latest work in the collection. It is entitled "Vitamins and Viscera". Others are scheduled to follow to complete the series, according to Cook.

Arnold came to the United States in 1941 from Paris, where his paintings have been exhibited. While he has developed the new medical art form, he emphasized that he received his original inspiration from a painting by the old Italian master Ercimboldo, now hanging in the Kaiserlich Art Museum in Vienna.

# WHAT ARE THE MOVIES DOING TO OUR YOUNG PEOPLE?

E. P. TOMPKINS, M.D.,
Lexington, Virginia.

A tragic occurrence which constitutes another terrific indictment of sensational movies and the sort of program which is fed to the youth of the land far too often by radio broadcasts, came under my observation as County Coroner, when called to investigate the recent death of a fifteen-year-old boy.

Briefly the circumstances were: The boy, son of moderately well-to-do parents, living on a farm, used his father's typewriter to leave a farewell note immediately before he fired a bullet into his brain. In most respects he was apparently a normal boy—fond of animals and especially his riding-horse mentioned in his note. He was a good swimmer, and rather daring in diving and water sports. Not brilliant in school, but passed his examinations without difficulty. But his chief hobby was attending lurid movies—the more sensational, the more he enjoyed them. He would frequently walk the five miles to town, and back late at night, to see such a movie. And he would sit for hours by the radio if he could get a program of this sort. Like many adolescent boys he was resentful of family discipline, and in his note blamed his mother, and his much older brother, who aided the mother is maintaining discipline, inasmuch as the father's business—a railroad mail clerk—kept him from home a large part of the time. (The family consisted of father, mother, and nine children, from, say, 28 to 13 years of age.)

The boy was an expert rider, and had trained his horse to "buck", and execute various tricks in true "western" style—a part of the lad's sensation-hungry disposition. He was very devoted to this horse.

He did some work on the farm, and likewise for neighbors, most likely for the purpose of earning money to spend on movies.

He apparently had no just appreciation or comprehension of the real meaning of death; and it would seem as if his mind dwelt on a sensational finale and a dramatic exit. His tragic death presents an appalling arraignment of the sort of mental pabulum supplied to the youth of the land.

A fellow-practitioner relates this experience, of recent occurrence: He was called to see a girl in early teens; found her in apparently very serious condition—gasping for every breath she drew, and trembling violently all over. At first he had an idea it might be due to a thymus gland trouble, and so at once took the child to the hospital and had an x-ray made of neck and upper chest. This showed nothing abnormal. Upon delving deeper into her history and her thoughts, he found the condition was entirely brought on by *fear*—the girl had been reading the so-called "Comics", with various sorts of horrors therein depicted, and had acquired such a fright of robbers or house-breakers and such that she was in mortal terror of her life. Isolation from this disturbing element for a few weeks restored her to a normal condition. Mothers who are at a loss to account for bad dreams and nightmares in their children may well look to this as a source of such disturbances.

It would certainly seem as if some sort of legislation is in order to do away with what is getting to be a real menace to youth. Having a bad influence on children and adolescents, these malicious agencies will undoubtedly result in later life in law-breaking and various offences against society. They should be curbed before the damage done is no greater than it already is. Immature minds are not competent to realize that the so-called "heroes" are flouting not only civic but moral laws as well.

## CORRESPONDENCE

### DeJarnette State Sanatorium.

TO THE EDITOR:

Despite the thousands of Virginians who have received treatment at the DeJarnette State Sanatorium, there are a good many Virginia physicians who do not appear to know much about the Institution. In the interest of the people of the Commonwealth and of the physicians who serve them, I am submitting the following information in the hope that you will see fit to publish it in the "Virginia Medical Monthly."

The Sanatorium was founded in 1932, as a unit of the Western State Hospital. It is located about two miles east of Staunton, Virginia, on the south side of U. S. Highway 250.

It was largely through the efforts of Dr. J. S. DeJarnette, now retired, that the Sanatorium was erected. Money was borrowed from the State treasury for this purpose, and the indebtedness was liquidated from the earnings of the Institution within a few years. The first hospital building constructed was named after the Institution's founder and was called the DeJarnette Building. The Perry Building was subsequently erected, and these two plus several smaller buildings for personnel, etc., constitute the physical plant.

The Sanatorium was established by Commonwealth statute as an autonomous institution, separate from Western State Hospital, in 1946. It was provided by statute, from the beginning (1932) that the Sanatorium should be self-sustaining and have no access to State tax revenues. The founding statute also specified that its mission should be to provide psychiatric care and hospitalization for the citizens of the Commonwealth at approximately cost and of a quality comparable with that of care provided by private institutions. It was anticipated that a reasonable net should be realized to amortize obligations incurred in old construction and to provide for necessary future construction.

Initially, there was strong opposition in the medical profession to the operation of such an institution by the Commonwealth. The thought was that it would place the latter in the position of competing with private institutions. However, it has never actually been in such a position and, happily, there remains hardly a vestige of the initial opposition. The Institution fills a very real need not only for the people but in the medical practice of the State's physicians. The basic concept of the Sanatorium is unique, but it has stood the test of time.

The buildings are fireproof. They are constructed of brick and concrete and embody a modified colonial style. Male patients are housed in the DeJarnette Building and female patients are accommodated in the Perry Building. They each have three stories. Actual bed capacity is 161 but working capacity is about 150.

The Sanatorium has previously been badly crowded, but in the past twelve months, the patient census has not been permitted to exceed 151. The patient turnover is very rapid. For this reason, there is seldom ever a waiting list. When there was such a list during the past year, the applicants did not exceed five or six, and they were admitted within a few days.

We are committed to a policy of caring for acute cases and those which could reasonably be expected to benefit from treatment. Many elderly patients are generally referred to as "seniles" with the implication that they are hopeless. This is actually far from the truth. The depressions of old age are very numerous. Hardly any conditions respond more dramatically to psychiatric treatment than these. We, therefore, do not reject any patient simply on the basis of advanced age.

There are no common wards in the institution. Accommodations consist of double rooms without private bath, single rooms without private bath, and double rooms with private bath. Every room is provided with running water except those few which are utilized for protective seclusion. Recreational facilities available include movies, library, golf course, badminton court, tennis court, croquet, dances, card parties, and others. There is a full time occupational therapist and a volunteer who works about half time. Occupational therapy facilities include leather and metal work, music, painting and drawing, sewing classes, letter writing class, gardening, calisthenics, etc.

There is also a full time physiotherapist. These facilities include infra red, ultra violet, galvanism, acetylcholine iontophorresis, cabinet baths, massage, continuous tubs, sitz baths, Scotch douche, etc.

The medical staff includes two full time physicians and one part time, all psychiatrists. The consultant staff, all practicing in Staunton, includes specialists in general surgery, orthopedics, internal medicine, eye, ear, nose, and throat, roentgenology, gynecology, and dentistry. Laboratory work is done by a full time laboratorian. Serology is done by the laboratory of the State Health Department. Pathology is done at the University of Virginia Hospital. A psychiatric and a neurological consultant are members of the staff of the University of Virginia Hospital. There are four graduate nurses in full time status and sixty attendants. There is a total of 119 employees of all categories.

Treatment facilities at the Sanatorium include conventional electroshock, brief stimulus therapy, deep insulin shock, individual and group psychotherapy, occupational therapy, physiotherapy, malarial and other antisyphilitic pyrexial therapy, massive penicillin and chemotherapy, lactic acid therapy for agitated depressions, and certain neurological procedures such as paravertebral, caudal, and transsacral blocks, alcohol and procaine nerve injections, iontophorresis, etc. Prefrontal leukotomy is done at places selected by families of patients but usually at the University Hospital or in Richmond. Diagnostic facilities of the psychiatric variety include the individual interview, observation, and psychometric testing. The Rorschach test is very frequently employed.

Cases accepted for treatment include the major psychoses, both organic and functional, the psychoneuroses, psychopathies, alcoholism, and the addictions. The treatment of alcoholism is chiefly along psychological lines but the physical conditions of these patients are also accorded considerable attention. Insulin in tonic doses is employed for inappetence. Electroshock is used in those cases showing more tension than usual. The acute phase of alcoholism is treated with sedation and a gradual liquor withdrawal schedule which reduces the incidence of alcoholic hallucinosis almost to the zero point. The reduction schedule takes three or four days for completion. As to how long an alcoholic should be hospitalized, we do not speak in definite terms but recommend a minimum of two weeks. The addictions are treated with a reduction schedule lasting from one to two weeks. We require that these patients be committed to us and that they remain for at least four weeks. Electroshock is also used in the addictions in selected patients, as are tonic doses of insulin.

C. EARLE JOHNSON, JR., M.D.,
*Superintendent*

*Published with the permission and approval of the Virginia Department of Mental Hygiene and Hospitals.

---

## Bibliotheca Obstetrica

HOBOKEN, NICOLAUS (1632-1678): Anatomia secundinae humanae, quindecim figuris ad vivum propria autoriis manu delineatis, illustrata. Ad nobilissimum amplissimumque virum, D. Nicolaum Tulpium, Medicum excellentissimum, Reip.Amstelr. Exconsulem, & Senatorum, & illustr. & Prepot. D.D. Hollandiae ac West-Frisiae Ordd. Delegat. Collegio adscriptum. Cum annexo S. Spicilegio Epistolarum, rem potissimum generatorium referentium. Trajecti ad Rhenum Apud Johannem Ribbium,1669. 221 (11) p. Front.port. engr.title page. 9 plates, 15.9 cm

Hoboken was a pupil of Diemerbroeck and professor at Utrecht and Harderwyk. These beautiful pictures of the placenta, umbilical cord and vessels, and the fetal membranes, drawn from life by the author show that he well understood the anatomy of the secundines. This little book was of considerable value in its time. According to Ricci (The Genealogy of Gynecology) the 1675 edition described the development of the corpus luteum during the pregnant state, but failed to mention whether it existed otherwise.

XUM

# PUBLIC HEALTH

L. J. ROPER, M.D.,
*State Health Commissioner of Virginia*

The report of the Bureau of Communicable Diseases of the State Department of Health for November 1948 as compared with the same month in 1947, and for the period of January through November 1948 compared with the same period in 1947, is as follows:

| | Nov. 1948 | Nov. 1947 | Jan.-Nov. 1948 | Jan.-Nov. 1947 |
|---|---|---|---|---|
| Typhoid and Paratyphoid | 6 | 29 | 127 | 160 |
| Diarrhea and Dysentery | 285 | 142 | 4,219 | 4,809 |
| Measles | 219 | 100 | 6,498 | 7,661 |
| Scarlet Fever | 91 | 182 | 807 | 1,184 |
| Diphtheria | 37 | 39 | 229 | 227 |
| Poliomyelitis | 45 | 18 | 562 | 172 |
| Meningitis | 10 | 4 | 84 | 95 |
| Undulant | 1 | 9 | 74 | 72 |
| Rocky Mountain spotted fever | 0 | 1 | 63 | 67 |
| Tularemia | 3 | 3 | 51 | 50 |

## DIPHTHERIA IN VIRGINIA

Diphtheria in Virginia in Last Five Years

| | CASES | DEATHS | CASE FATALITY RATE |
|---|---|---|---|
| 1943-1944 | 349 | 17 | 4.9 |
| 1944-1945 | 345 | 29 | 8.4 |
| 1945-1946 | 669 | 52 | 7.8 |
| 1946-1947 | 460 | 30 | 6.5 |
| 1947-1948 | 254 | 21 | 8.3 |

With the return of American soldiers from Europe in 1945-46 it was feared that there would be an increase in diphtheria. Fortunately, these fears have not been substantiated. It will be recalled that during the winter of 1945-46 there was a high incidence of diphtheria in Europe, Germany reporting 17,000 cases in a month, the Netherlands 5,000, Poland 4,000 and Czechoslovakia 3,000, for a like monthly period. Not only was there high incidence, but the case fatality was high. It was, therefore, felt that the exposure of thousands of American soldiers to this organism of apparently high virulence made it probable that many of these soldiers would return as diphtheria carriers. The Virginia figures for the year July 1, 1945-June 30, 1946, appeared to justify this apprehension. From a low of 345 in 1944-45, the case reports soared to a high of 669 in 1945-46, but for some reason there has been a progressive decline in incidence since that year. There were 460 cases reported in 1946-47, 254 in 1947-48, and for the first five months of the current reporting year, 111. Case fatality rates have been relatively high.

For the country as a whole the Public Health Service reports a corresponding decline. Through December 4, 1948, a total of 8,908 cases of diphtheria has been reported, the lowest figure for the corresponding period on record. This may be compared with 11,220 in 1947; 14,777 in 1946; 16,744 in 1945; and a five-year median of 12,643 cases for the corresponding periods.

However, these fluctuations downward should not give a sense of false security. In control of diphtheria, eternal vigilance is still the price of security. This vigilance is two-fold, widespread immunization and the detection, wherever possible, of carriers.

Immunization should be given during the last half of the first year of life. It is dangerous to wait until the child reaches school age before immunization, since two-thirds of the deaths from diphtheria occur before school age. In public health practice the immunization program is pushed actively until at least half of the children in all age groups have been protected.

The handling of the carrier is a "headache" for the health officer. Among the numerous chemical and physical agents that have been tried, the best so far is the removal of diseased tonsils and adenoids. Some success has been reported in the use of penicillin and warrants trial before surgery. Organisms should be tested for virulence before resorting to nose and throat surgery as a method of eliminating carriers.

# MEDICAL SOCIETY OF VIRGINIA
## COUNCIL
### Special Meeting

A special meeting of the Council was held at the Society's office, Richmond, December 16th at 4:30 P.M., with the president, Dr. M. Pierce Rucker, presiding. Others attending were: Dr. W. C. Caudill, president-elect; Dr. C. L. Outland, first vice-president; Dr. L. J. Roper, State Health Commissioner; Drs. R. B. Bowles, C. L. Harrell, Guy W. Horsley, W. J. Ozlin, W. A. Porter, John T. T. Hundley, R. P. Bell, Jr., V. W. Archer and James P. King, councilors; Dr. Walter B. Martin, member of the Board of Trustees of the American Medical Association; Drs. J. M. Hutcheson and H. B. Mulholland, delegates to the A.M.A.; and Mr. Henry Johnson, public relations director.

There being a quorum, the President said he would take up a few matters while waiting for the others to come. On motion, minutes of the last meeting of the Council were accepted as printed in the December, 1948, VIRGINIA MEDICAL MONTHLY.

Dr. Rucker said that the Chamberlin Hotel, Old Point Comfort, had been selected for the 1949 meeting but, as he had heard some criticism of starting the business sessions on Sunday, he would like to know the wishes of the Council. Several felt this had proved very satisfactory at the last meeting and it was decided that the Council and House of Delegates meet on Sunday afternoon again in 1949. Dates were named as October 9-12.

In accordance with vote taken by mail, it was stated that the view boxes for scientific exhibits, owned by the Society, have been given the Medical College of Virginia, in view of other arrangements for these exhibits.

The President then announced that the special purpose of this meeting was to consider the action taken by the House of Delegates of the American Medical Association, at its recent meeting in St. Louis, with regard to an assessment of $25.00 on each member of the American Medical Association. The secretary was asked to read the following telegram:

> Recent interim session House of Delegates unanimously decided to assess each member of the American Medical Association twenty-five dollars. You are requested to collect this assessment through your county units or any other way you desire. Bill Association for any extra expense in connection with collection.
>
> GEORGE F. LULL, *Secretary*
> American Medical Association.

Dr. Rucker asked Dr. Martin, American Medical Association Trustee, who had been named a member of the Planning Committee for this campaign, for further information. He said it was reasonably sure that the Murray-Wagner-Dingell Bill with some modifications would come up in Congress again this year, and it was felt the American Medical Association, state and county societies and individual doctors should be aroused to meet the issue. The Trustees and House of Delegates were opposed to any form of socialized medicine and felt the best way to combat this was to put on a nationwide plan of education on the progress of American medicine, stressing the advantages of the American system in giving a high quality of medical care. To do this, it was necessary to have funds and, for this purpose, it was decided to levy an assessment of $25.00 on each member of the Association. A Planning Committee was appointed to govern the over-all policies of the campaign and the Committee had already decided to employ Whitaker and Baxter of San Francisco as public relations counsel. They will direct the campaign from a Chicago and Washington office, working closely with headquarters. This is the firm which last year directed the campaign of the California State Medical Association in defeating the program for compulsory health insurance as proposed by Governor Warren.

In addition to paying the assessment, Dr. Martin said it would be necessary for doctors to know how their representatives in Congress stand and inform them if necessary as to the type of medical care to the public that would result from President Truman's proposed compulsory sickness insurance program. Drs. Mulholland and Hutcheson felt it would take salesmanship but that the immediate responsibility is to collect the assessment and then to help in every way in carrying out the objective. This Dr. Hutcheson felt could best be handled through component societies and district councils.

Question was asked as to how the assessment should be collected. Dr. Martin suggested that it should first be decided if the Council approves the plan and then how to collect it. Dr. Mulholland asked if all the money would be used for the educational program or for any other purpose. Dr. Martin said the Board of Trustees would like to be empowered to use the money as they felt it was needed. They are going ahead with the funds they have, borrowing if necessary, but wish to be reimbursed.

Dr. Harrell moved that this body go on record as approving the action of the American Medical Association in assessing all members $25.00 for this campaign, and that we give them our hearty support. This was seconded. Dr. Hundley said his society was enthusiastic about helping and he did not feel there would be any trouble in raising the fund. Dr. Archer cited the work done in California, stating that with what they raised they were able to secure very able public relations counsel, which Dr. Martin said is the counsel already engaged by the American Medical Association. Dr. Harrell's motion then put to vote was carried unanimously.

The next question was how to collect the assessment. In the discussion which followed, it was felt this matter should be handled on the local level through the component societies but it would not affect the membership of anyone who would not pay. Dr. Bell asked if this could be taken up through the Public Relations department, but Dr. Martin felt the councilors should inform the local societies. Dr. Bowles asked if it might be discussed at the Public Relations conference to be held short-

XUM

ly. Mr. Johnson said if the Council wished they can have a discussion of this subject fit in their program.

Dr. Hundley then offered the motion that a letter be sent immediately to the secretary of each component society, and to each member of the district councils, requesting that immediate steps be taken to collect the $25.00 assessment to combat compulsory insurance; that copies of these letters be sent to each councilor, together with a letter informing him that he is responsible for securing this collection within his district, and also notifying him that necessary expenses will be paid. This was seconded. In the discussion, it was felt that every councilor should be given all information possible and arrangements be made to contact every doctor in the State. Every congressman should be seen with the idea of finding out his attitude on the subject of socialized medicine; if on the fence, he should be educated. Dr. Archer felt that each councilor should indoctrinate the members of his district council, and should find out the best way of contacting the congressman, probably through his family physician. It was also suggested that each local society should collect from its members, and send the money to the state society with a roster of contributors. This money should then be sent to the American Medical Association. Dr. Hundley's motion was then carried.

There followed an informal discussion on Blue Cross and Blue Shield and the need of the doctor's support in joining and educating their patients in regard to these organizations.

AGNES V. EDWARDS,
*Secretary.*

Approved:
M. PIERCE RUCKER,
*President.*
December 20, 1948.

---

## WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

*President*—MRS. R. M. REYNOLDS, Norfolk
*President-Elect*—MRS. C. E. HOLDERBY, Hilton Village
*Recording Secretary*—MRS. T. S. CHALKLEY, Richmond
*Corresponding Secretary*—MRS. CHARLES LUPTON, Norfolk
*Treasurer*—MRS. REUBEN SIMMS, Richmond
*Parliamentarian*—MRS. H. W. ROGERS, Norfolk
*Historian*—MRS. M. H. HARRIS, West Point

### Report of National Conference.

On November 4th and 5th, Mrs. R. M. Reynolds, President of the Woman's Auxiliary to the Medical Society of Virginia, and I attended the National Conference for Presidents, Presidents-Elect and Chairmen of Standing Committees. The Conference was held in the Hotel Sherman in Chicago. Thirty-five States and Hawaii were represented.

The meeting was called to order by Mrs. Luther Kice, National President, who presided. She was assisted by Mrs. David Allman, President-Elect.

Dr. Frank G. Dickinson, Bureau of Economic Research, A. M. A. gave a talk on Medical Economies in relation to the Woman's Auxiliary.

Dr. Fred Hein, Consultant on Physical Fitness, A. M. A. told us about School Health Programs. He suggested college courses in health instruction for teachers, instruction in health and healthful living for pupils, and school health councils; one member to be a representative of the medical profession, to meet with parents, teachers and supervisors to discuss health needs of the school.

Mr. William Doscher, Assistant Director of Public Relations, A. M. A. spoke on Auxiliary Public Relations.

Mr. Thomas A. Hendricks, Secretary, Council on Medical Service, A. M. A. reported on the Hoover Commission. Mr. Hendricks said, "new health legislation can be expected." "Mr. Oscar Ewing, Federal Security Administrator, who advocates Free Health and Free Medical Service for every one in the United States within ten years, will be head of any National Health Program." We were told, "it will cost $10,000,000,000 to start this program, not support it." "If everything is free who will pay it?" "Where will the money come from?"

Mr. Arthur Conrad, Assistant Administrator, National Physicians Committee for the Extension of Medical Care gave a spirited talk on Communism and the forces behind the drive for Socialized Medicine. He said, "Wake up, doctor's wives, Educate Yourselves, Read the Communist Manifesto." He told of the use in some states of school text books to spread communistic ideas and propaganda. He stressed the importance of right instruction and instructors for our young people in our fight against Communism and the major role they will play in this fight.

Dr. E. L. Bortz, Past President of the American Medical Association, said the Auxiliary is assuming its rightful role by helping in Public Relations. Medicine in 1949 will be at its cross-roads. He said organize and fight Socialized Medicine by exposing its evils.

Dr. Louis H. Bauer, Vice Chairman, Board of Trustees, A. M. A. told of the organization in September 1947 in Paris of the World Medical Association and some ways it promotes good will and friendship between nations.

We received a number of useful and interesting ideas from the discussion of state auxiliary activities by the presidents.

Thursday luncheon was served in the Rose Room for the conference members and that evening at 7:00 o'clock a conference dinner was held in the Crystal Room.

Mrs. William Bergin, Pepeekeo, Hawaii, presented to each one present a Hawaiian Orchid.

Friday luncheon was served in the Grey Room. After a business session the meeting adjourned.

MARION HOLDERBY (MRS. C. E.)
*President-Elect*

**Presidents of County Auxiliaries.**

NORTHAMPTON-ACCOMAC

Mrs. W. J. Sturgis, Sr., Massawadox.

RICHMOND

Mrs. Thomas Wheeldon, 6311 Three Chopt Road, Richmond.

DANVILLE-PITTSYLVANIA

Mrs. J. L. Jennings, Manchester Avenue, Danville.

PETERSBURG

Mrs. William Grossmann, 1762 Matoax Avenue, Petersburg.

ARLINGTON

Mrs. J. Robins McGriff, McLean.

ALEXANDRIA

Mrs. Harrison Picot, 804 Prince Street, Alexandria.

MID-TIDEWATER

Mrs. M. H. Harris, Box 250, West Point.

NORTHERN NECK

Mrs. A. B. Gravatt, Kilmarnock.

NORFOLK

Mrs. Mallory S. Andrews, 7609 Gleneagles Road, Norfolk.

WARWICK

Mrs. Chester D. Bradley, 222 Pocahontas Drive, Hampton.

---

## BOOK ANNOUNCEMENTS

**Pathology.** Edited by W. A. D. Anderson, M.A., M.D., F.A.C.P., Professor of Pathology and Bacteriology, Marquette University School of Medicine, Milwaukee, Wisconsin. St. Louis, The C. V. Mosby Company, 1948. xii-1453. With 1183 Illustrations and 10 Color Plates. Cloth. Price $15.00.

**Clinical Urology.** Essentials of Diagnosis and Treatment. By LOWRAIN E. McCREA, M.D., F.A.C.S., F.I.C.S., Clinical Professor of Urology, Temple University Medical School; Attending Urologist, Philadelphia General Hospital. Second Edition. Philadelphia, F. A. Davis Company, 1948. xii-503 pages. With 263 Illustrations, 7 in Color. Cloth. Price $6.50.

**A Brief History of the South Carolina Medical Association** to which are added short historical sketches of various medical institutions and societies of South Carolina, VI, 197 p. front. port. illustrated. Published by the South Carolina Medical Association at its Centennial meeting, Charleston, 1948.

This attractive little history of the South Carolina Medical Association and its component societies should prove interesting to Virginians. The two States have much in common. Both, until quite recently, had an agricultural civilization, but in Virginia the planters lived on the farms whereas in South Carolina the planters lived in Charleston. Possibly for this reason the South Carolina Medical Association began its career with a botanical garden and a library with a paid librarian. I was surprised that its first fee bill makes no mention of obstetrics, especially since Dr. John Moultrie of Charleston was probably the first obstetrician in the Colonies. It is also surprising that as late as 1821 the charges were still expressed in pounds, shillings and pence. In 1850 the members of the State Association expressed indignation at the promiscuous way in which members of the clergy furnished testimonials for nostrums and threatened to cease giving free medical attention to the parsonage. At a later date a subsidiary society actually took such action. I learned many things that I never knew before from reading this book, such as: The South Carolina Medical Association was the Board of Health of the State of South Carolina, and that Dr. W. C. Norwood of Norwood's tincture fame was a South Carolinian. One statement, however, I must take exception to, and that is "There had been no state medical journals until 1899. South Carolina was the first Southern State to undertake publications of its own periodical."

The book is well illustrated. At the end of many chapters are interesting vignettes of saddle bags, medicine chests and scarifiers. Appropriately enough a scarifier is at the end of the chapter on "The Doldrums."

M. P. R.

## EDITORIAL

### Teaching Allergy to Undergraduates

ALLERGY is a subspecialty of internal medicine, a subspecialty, however, that because of its numerous impingements upon many other fields of medicine and the high incidence of the diseases due to it, should be accorded in its own right a prominent and respected position in the family of medical specialties. To attempt to separate allergy too far from internal medicine or from the other specialties would be a dangerous experiment.

David P. Barr, professor of medicine at Cornell University, several years ago set forth in clear language the need of the internist for a broad and sympathetic understanding of these relationships. He reminds us that "the concept of altered reaction to bacterial and nonbacterial substances is one of the most important ideas of medicine today. It ranks with psychosomatic medicine, with the study of the circulatory apparatus, with bacteriology, with metabolism, and with clinical chemistry. It is relevant to the pathogenesis and affects the practical management of much more than one-half of all the diseases to which flesh is heir. It is part and parcel of internal medicine and no internist can be regarded as completely trained who is not thoroughly cognizant of the principles of sensitivity, of anaphylaxis and of the altered reaction of the body to proteins."

The allergist stands equally in need of knowledge of internal medicine, and he must not neglect the techniques by which the internist conducts his comprehensive and searching studies of the patient. It is incumbent upon the allergist to cultivate an awareness of related metabolic, upper and lower respiratory, circulatory, dermatologic, pediatric, and psychosomatic problems. A good allergist must first of all be a good internist.

The question naturally arises where and how these concepts are to be inculcated. That is a problem to which the American Academy of Allergy is now addressing itself, believing that the start must be made in our schools of medicine. Such surveys as have been conducted to date indicate in many instances a surprising deficiency in undergraduate instruction in allergy. Dr. Oscar Swineford's survey, reported in 1946, showed that of 31 schools questioned, 12 "offered little or no organized instruction in allergy", while in 14 others, instruction was obviously inadequate. It is astonishing to learn that in one of our top medical schools only two one-hour lecture periods are devoted to the subject. Inadequate undergraduate instruction is reflected at higher levels, internes and residents showing little interest in, or comprehension of the problems of allergy. Barr remarking on the sequel says, "It is more than deplorable that many young internists have been permitted to finish their training almost without contact with allergy and allergic thought. Some of them have been so crassly ignorant as to regard the whole specialty as a somewhat unnecessary and undesirable field."

There is evidence to show, however, that professors of medicine, deans of medical schools and curriculum committees are becoming increasingly anxious to assign allergy its proper place in the medical course. The approach appears to lie along a number of roads. It is beginning to be realized that the study of allergy as an undergraduate discipline is handicapped by the lack of coordination among various departments of the medical school, most of which are concerned at one time or another with the fundamental principles of allergy. Unnecessary overlapping and serious omissions can be avoided by the heads of departments sitting down with the curriculum committee and planning for the student's instruction in allergy and its asso-

ciated specialty, immunology, from the day he enters the medical college until his graduation.

The Academy of Allergy has set up what it regards as a minimal allergy curriculum. In its opinion each student should have at least twelve hours of instruction in anaphylaxis, the pathologic physiology of allergy, the clinical recognition of its manifestations, its etiologic diagnosis and its treatment. An allergy clinic in a teaching institution is regarded as *a sine qua non.* Like every other clinic in such an institution a good allergy clinic has two problems—the care of the sick and the education of future doctors of medicine. It will perform these functions best when its staff is composed of trained allergists; and when its laboratory equipment and technical assistants are not hampered by inadequate budgets. For those students who wish to emphasize allergy or to pursue it later as a specialty, elective courses should be a part of the curriculum.

Instruction in allergy promises to be best in those institutions in which research in the many unsolved problems of both immunology and allergy are attacked on the level of the basic sciences. So closely interknit are the problems of allergy and immunology and so intimately do they concern the internist that the allergist should become the hospital consultant not only in the situations involving clear cut allergic disease but also in those border-line cases in which the fundamental concepts of immunology and allergy may be involved. Such cooperation would mean much in a teaching institution where students are so sensitive and responsive to the attitudes of their professors.

After all is said and done however, much as we regret to admit it, undergraduate instruction in allergy depends largely for its success upon the resources, chiefly monetary, that are at its disposal. These come naturally from two sources, the budgetary allowances of the institution to the department, and funds earmarked for research by some public spirited individual or by one of the foundations which have so admirably furthered the progress of medicine in a number of other specialties. One still has to put something into the hopper if one expects to get something out.

WYNDHAM B. BLANTON

---

## Public Schools and Public Health

THE immediate Past-President of the American Public Health Association is a staunch advocate of Federalized medicine. As Associate Chief of the United States Children's Bureau she had much to do with initiating and the conduct of the Emergency Maternal and Infant Care and she was an advocate of enlarging that service and extending it into the post-war period. At the recent meeting of the American Public Health Association in Boston, in her presidential address, she said that the only way of bringing health care to all the people is through a public program that is as freely available to the mothers and children as is our public educational system.

When so great an authority as Dr. Martha Eliot makes such a statement it behooves us to pursue her analogy and to determine just what are its implications. Since 1860 the public school system has been in operation in every State in the Union. The public school system is sometimes called the free school system, especially in the West. It is free only in the sense that the individual can patronize the school without incurring additional expense. He pays for it indirectly in taxes and these keep up as long as he lives.

What has been accomplished in the past 88 years in the way of the quality and quantity of education and how have the teachers fared?

The public schools in England, which are anything but free or public in the sense that we use the term in this country, and the private academies in this country like Phillips Andover, the Episcopal High School, Woodberry Forest, Staunton Military Academy, Randolph-Macon Academy, St. Christopher's or McGuire's here in Richmond, provide much sounder education than do the public high schools. This is true in spite of the fact that many problem children are sent to the private schools.

The location and management of the public schools have been the province of government for the past 88 years. Nevertheless it has failed to reach all the people. The percentage of illiteracy is still high. The figures of the draft boards have been frequently used to show that medicine has fallen down on its job, yet illiteracy was the cause for rejecting more draftees than any other factor.

How have the teachers fared under the public school system? It is notorious that public school teachers are the poorest paid of any educated class. Typists and secretaries get more money. Laboratory technicians are much better paid as are trained nurses. Beauty shop managers earn from $1820 to $6500 in comparison to high school teachers whose salaries range from $1056 to $1807. Manual labor pays much better than school teaching and even a cook or a domestic servant has more "take-home money".

In all fairness it should be borne in mind that in 1860 the need was great and much had to be done. At the same time the conditions in medicine were deplorable. There was little real knowledge of disease and the teaching in the medical schools was anything but good. Hospitals were few and their patients were either well-to-do or the very poor. The building of a hospital is much more expensive than the building of a school and the maintenance of a hospital is tremendously more expensive than the running of a school. The education of a doctor is a long and expensive process whereas the education of a teacher is comparatively simple. Yet in spite of these differences, medicine put its own house in order—unaided. The people in the United States are getting better medical care than any people on earth. The best of medical care is available to all who care to pay for it, and there are plans by which the people can budget their hospital and medical care costs. Any Blue Shield-Blue Cross subscriber can tell you that it is not expensive.

---

## The Cost of Medical Care

AT the recent Middle Atlantic States Regional Conference in Philadelphia the cost of hospital care was seriously considered. The morning session was devoted to "What is the Responsibility of the Practitioner in Relation to Hospital Financing." Rufus Rorem presented the viewpoint of hospital administration, Rubin C. Buerki the professional viewpoint and F. A. Arestad the viewpoint of the American Medical Association. From the discussion, several definite impressions stand out. The accounting system should be such that the cost of every department at least, should be known, and as far as possible, the hospital charges should be so adjusted that each department should pay its own way. The day when endowments can be expected to take care of deficiencies is past, for the simple reason that no new endowments seem to be forthcoming and the existing endowments yield so little. Nor should anesthesia or x-ray department be made to pay for room and board or for the laboratory. The American Medical Association is concerned with corporations practicing medicine. The courts have held that this is illegal. Where diagnostic clinics come in under these rulings was not made clear. Someone suggested that they were not practicing medicine, but they were certainly adding to the overall cost of medical care. Dr.

Buerki said that doctors could do a lot to keep down the cost of hospital care. He cited an example that occurred when streptomycin was first available. He asked a doctor why he used $1700 worth of the new drug on a patient when it did not seem to be indicated. The reply was, "What difference did it make to the hospital, the patient could pay for it". Dr. Buerki's reply was that the publicity given to such bills made for unfavorable public opinion.

At the luncheon, Dr. Joseph Lawrence spoke on the "Washington Horoscope". The question that was asked him in Washington most frequently and the one he had the most trouble in answering was, "What can be done about the cost of medical care". It was easy to say that it had not advanced more than the cost of everything else;—food, clothing and housing, but that did not keep the legislators from taking a hand in solving the problem. The afternoon was devoted to discussing "Blue Cross-Blue Shield Commission Proposals", which is medicine's answer in helping the public meet this rising cost.

On our way home, we had the opportunity of visiting the newest teaching hospital, a beautiful example of plain surfaces, bright with glass and shining metal. It has 74 beds for obstetrical patients and accommodations to meet the needs of every sort of obstetrical patient, except the one with the lean pocketbook. There was a wing for infectious cases, a four bed ward and a four bed bassinet nursery for infected babies, a four bed ward and a four bed bassinet nursery for infected mothers and other accommodations for the patient who did not fit into either of the above categories. The entire wing was absolutely empty, which speaks for the good technic of the hospital. There were groups of two bed rooms with a glass enclosed four bassinet nursery in between, so that the mothers and fathers could see their offspring at all times. Other rooms had glass enclosed nurseries in the corner of the room. Then there were conventional rooms that were served by the general nursery, but here the infants had individual cubicles. All of this filled us with envy, but having just come from the conference on the cost of hospital care, we wondered if the architects had not sold the public "a bill of goods". If the public wants such luxury and can pay for it, ($23 a day with nurses' and obstetrical fees extra) it is all right of course, but the public should stop *griping* about the cost of medical care.

In this connection, at the Congress to Celebrate the 300th Anniversary of the Rotunda Hospital, the statement was made and backed up by figures, that the Dublin Hospital with the oldest and most primitive accommodations, got better results with the newborn baby than the National Hospital with all the latest nursery improvements. In our thinking and practices we should draw the line clearly between necessities and luxuries.

---

## The World Medical Association

THE organization and purposes of the World Medical Association was discussed in the January issue of the *Monthly* (75:49, 1948.) In the November issue of the Connecticut State Medical Journal, Dr. Creighton Barker has an interesting account of the Second Annual Assembly of the World Medical Association that was held in Geneva, September 8, 9, 10, and 11. The first major item to be considered was the international pledge; what might be called a modern Hippocratic Oath except that the word *oath* has so many connotations in the many countries represented that the word *pledge* had to be substituted. It is called The Declaration of Geneva and is to be subscribed to "At the time of being admitted as Member of the Medical Profession:

"I solemnly pledge myself to consecrate my life to the service of humanity;

"I will give to my teachers the respect and gratitude which is their due;

"I will practice my profession with conscience and dignity;

"The health of my patient will be my first consideration;

"I will respect the secrets which are confided in me;

"I will maintain by all the means in my power, the honor and the noble traditions of the medical profession;

"My colleagues will be my brothers;

"I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient;

"I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use any medical knowledge contrary to the laws of humanity.

"I make these promises solemnly, freely and upon my honor."

The Association discussed such subjects as "The Status of the Medical Profession in Twenty-Three Countries", "The Advertisement of Patent Medicines", "Proposals Relative to Universal Medical Qualifications", "Unqualified Medical Practice", "Postgraduate Medical Education", "The Training of Specialists", "An International Code of Medical Ethics". The last subject to be discussed, National Health Insurance came in for the longest discussion. There seemed to be no question but that the lot of physicians in national health insurance countries was far from happy. The Association finally adopted unanimously the following twelve points which should govern whenever medical care becomes a part of Social Security:

1. Freedom of choice of physician by the patient. Liberty of physician to choose patient except in cases of urgency or humanitarianism.

2. No intervention of third party between physician and patient.

3. Where medical service is to be submitted to control, this control should be exercised by physicians.

4. Freedom of choice of hospital by patient.

5. Freedom of physician to choose the location and type of his practice.

6. No restriction of medication or mode of treatment by physician except in case of abuse.

7. Appropriate representation of medical profession in every official body dealing with medical care.

8. It is not in the public interest that physicians should be full time salaried servants of the government or Social Security bodies.

9. Remuneration of medical services ought not to depend directly on the financial condition of the insurance organization.

10. Any Social Security or insurance plan must be open to the participation of any licensed physician, and no physician should be compelled to participate if he does not wish to do so.

11. Compulsory health insurance plans should cover only those persons who are unable to make their own arrangements for medical care.

12. There should be no exploitation of the physician, the physician's services or the public by any person or organization.

Dr. Barker reports that a quarterly journal of international medicine is to be established. The original contributions will be published in the language of the country in which it originated, and there will be abstracts in French, Spanish and English. Dr. Morris Fishbein is to be the editor.

## SOCIETIES

### Northern Virginia Medical Society

The tri-yearly meeting of the Society was held in Front Royal, December 14, 1948. Doctors present were: John Adams, L. F. Hansbrough, W. E. Lynn, J. A. Miller, Conrad Gossells, C. E. Foley, George Murphy, F. W. Gearing, Jr., W. S. Carter, George Smith, Charles Bondurant, P. W. Boyd, R. K. Butler, Leslie Bell, Monford Custer, F. C. Downey, T. A. Gibson, E. L. Grubbs, E. L. Hopewell, J. M. Winkfield, F. D. Maphis, Jr., Edmund Horgan, C. H. Iden, T. C. Iden, D. M. Kipps, George Long, J. B. McKee, Harold Miller, Herman Pifer, C. L. Riley, Elizabeth Sherman, R. W. Stoneburner, L. K. Woodward and John Cadden.

The meeting was conducted by Dr. C. H. Iden of Berryville, Va., president of the society.

Case reports were presented by Dr. L. J. Hansbrough of Front Royal and Dr. John Adams of Winchester.

Dr. Harold Miller of Woodstock, discussed some of the highlights from the Medical Society of Virginia State Convention, held in Richmond during October.

The society was honored by two guest speakers. Dr. John P. Gallagher of Washington, D. C., Associate Professor of Neuro-surgery at Georgetown University, spoke on "Surgical Treatment Of Intractable Pain", and Dr. Theodore E. Woodward, of Baltimore, Md., Associate Professor of Medicine at the Maryland University School of Medicine, spoke on "Clinical Uses Of Chloromycetin and Auriomycin". Both papers were of unusual interest.

The following officers were elected for the coming year: President, Dr. Harold Miller, Woodstock; vice-president, Dr. James Miller, Winchester; and secretary-treasurer, Dr. F. D. Maphis, Jr., Strasburg.

Dr. George H. Murphy, pathologist for the Winchester Memorial Hospital, Winchester, was received into the society.

FRED D. MAPHIS, JR., *Secretary*

### Danville-Pittsylvania Academy of Medicine.

The following have been elected officers of this Society for 1949: President, Dr. E. B. Robertson; vice-presidents, Drs. R. W. Garnett and H. H. Hammer; and secretary-treasurer, Dr. John J. Marsella.

### The Fredericksburg Medical Society,

At its meeting on December 10th, elected the following officers for 1949: President, Dr. W. W. Butzner; vice-president, Dr. George Reynolds; and secretary-treasurer, Dr. Lloyd Moss.

### Lynchburg Academy of Medicine.

At the annual business meeting held on December 13th, the following officers were elected for 1949: Dr. William T. Pugh will succeed to the presidency; Dr. H. H. Hurt, president-elect; Dr. S. H. Rosenthal, vice-president; and Drs. E. A. Harper and J. G. Holland, trustees. The secretary is to be named by the board of trustees.

### Richmond Academy of Medicine.

At the annual meeting on December 14th, the following officers were elected for 1949: Dr. Harry J. Warthen, Jr., will succeed to the presidency; Dr. Henry W. Decker was named president-elect; Drs. Emily Gardner and Webster P. Barnes, vice-presidents; and Drs. Guy W. Horsley and R. D. Butterworth, members at large on the Board of Trustees. Dr. H. Hudnall Ware, Jr., retiring president, will be chairman of the Board of Trustees. The Christmas party followed a business session.

### The Fourth District Medical Society

Held its annual meeting in Petersburg on December 14th, under the presidency of Dr. Herbert C. Jones. The scientific program consisted of talks by Dr. James L. Hamner, president of the Virginia Academy of General Practice; Dr. McLemore Birdsong, assistant professor of pediatrics, University of Virginia; Dr. M. Pierce Rucker, president, Medical Society of Virginia; and Dr. T. Duckett Jones, medical director of the Helen Jay Whitney Foundation of New York City.

The following officers for 1949 were elected: president, Dr. John A. B. Lowry, Crewe; vice-presidents, Drs. H. E. Whaley, Victoria, and L. P. Jones, Emporia; secretary-treasurer, Dr. William S. Sloan, Petersburg (re-elected); and chairman of the steering committee, Dr. William Grossmann, Petersburg.

XUM

### The Smyth County Medical Society

Held its regular meeting at Hotel Lincoln, Marion, on December 15.

Dr. W. S. Schiff and Dr. C. C. Hatfield reported that a large number had been typed on the Red Cross Program.

Report by Dr. R. D. Campbell on the 1948 annual meeting of the Medical Society of Virginia was read.

It was voted that the Secretary write the Kiwanis Club of Saltville in appreciation of the dinner they served the Society in November. Dr. R. H. Harrington suggested that the Society meet with the service clubs as a means of promoting the medical side in the controversy over socialized medicine. It was also suggested that some arrangement be made to put a program on the radio station, the Secretary to contact the proper authorities.

The following officers were elected for the ensuing year: President, Dr. D. C. Boatwright, Marion; Vice-President, Dr. C. C. Hatfield, North Holston; Secretary-Treasurer, Dr. R. C. Potter, Marion; Dr. Walter S. Schiff was named to serve on the Board of Censors for three years.

Dr. Lewis E. Jarratt spoke on the progress which has been made by the A.M.A., the hospitals, the State of Virginia and the physicians themselves toward combating the present movement toward socialized medicine. This participated a lively discussion on the subject by various members which led Dr. C. C. Hatfield to move that the next meeting be a round table discussion on the ways and means this society has in the same effort. It was further moved that Dr. Jarrett get further facts and information in regard to this subject as it pertains to our local situation.

RICHARD C. POTTER,
*Secretary-Treasurer*

---

## NEWS

### A.M.A. To Fight Socialized Medicine.

What might be termed the "theme song" at the recent meeting of the American Medical Association in St. Louis was its opposition to socialized medicine and any form of *compulsory* sickness insurance as proposed by Federal Security Administrator Ewing. In order to make this fight, it was felt that there should be put on an educational campaign to awaken the doctor as well as the layman to the danger of a politically controlled *compulsory* health insurance system; that the people should be enlightened as to the superior advantages of American medicine over government controlled medicine; and that the nation as a whole should be urged to secure *voluntary* health insurance and prepaid medical care so as to have the kind of medical service desired.

One feature of the first meeting of the House of Delegates was the naming of the outstanding general practitioner of the year. Twenty-two names had been submitted by state societies from which the Board of Trustees selected three to be presented to the House. The winner by ballot was Dr. William L. Pressley of Due West, South Carolina.

### Dr. Charles W. Putney,

Staunton, has resumed his practice there after taking a special course in surgery at the Cook County Graduate School of Medicine in Chicago.

### University of Virginia Medical News.

On November 20th, Dr. J. Edwin Wood, Jr., Professor of Practice of Medicine, attended the Postgraduate Course of the American College of Physicians, held at the Massachusetts General Hospital, Boston, and addressed the group on the subject: "Low Sodium Diets in Vascular Disease, Physiology, and Therapeutic Considerations".

On November 22nd, the Postgraduate Program for House Officers presented as guest speaker Dr. Harris B. Shumacker, Jr., of the Indiana University Medical Center. Dr. Shumacker's subject was: "The Treatment of Peripheral Vascular Disorders".

Dr. Dexter M. Bullard, Superintendent of the Chestnut Lodge Sanitarium, Rockville, Maryland, lectured to the faculty and student body on the subject, "Limitations of Psychotherapy", on November 23rd.

Dr. J. Edwin Wood, Jr., spoke before the Pere Marquette Association of Railway Surgeons at White Sulphur Springs, West Virginia on November 29th, on the subject: "The Advantages and

Dangers of the Low Sodium Diet in the Treatment of Cardiovascular Conditions."

On December 3rd, under the auspices of Pi Mu Chapter, Phi Chi Medical Fraternity, Dr. Edmund B. Spaeth of the Graduate School of Medicine of the University of Pennsylvania, spoke to the faculty and student body on the subject "Pathological Oculomotor Reflexes, Congenital and Acquired".

Dr. L. G. Sewall of the Veterans Administration Hospital, Roanoke, spoke to the faculty and student body on the subject, "Vocational Rehabilitation", on December 2nd.

On December 9th, Dr. J. Edwin Wood, Jr., spoke before the Postgraduate Course in Medicine, sponsored by the Extension Division of the University of North Carolina, Shelby, North Carolina, on the subject: "The Management of Cardiovascular Diseases and Renal Diseases in General Practice."

On December 10th, Dr. Charles Venable, Chief Surgeon, Nix Hospital, San Antonio, Texas, presented to the faculty and student body the second lecture in the series of Annual Charles Scott Venable Lecture on Traumatic Surgery. Dr. Venable spoke on the subject: "Transposition of Bone Chips or Muscle Implants in Early Closure of Osteomyelitis, with Antibiotic Control."

Dr. Harry Gold of the School of Medicine, Cornell University, spoke to the faculty and student body on the subject "Digitalis" on December 13th.

On December 14th, Alpha Omega Alpha, National Honorary Medical Fraternity, presented as guest speaker, Dr. Leo H. Bartemeier of Wayne University, Detroit, Michigan. Dr. Bartemeier's subject was: "Sleep and Its Disturbances."

**Industrial Health.**

The annual Congress on Industrial Health will be held on January 18 and 19 at the Drake Hotel, Chicago. The opening general session on the 18th will define the purposes of the Congress, and the operation of the panels. The keynote address on the worker's interest in health will be presented by an outstanding labor leader. A symposium will also be conducted on "New Horizons in Industrial Health" to be participated in by Surgeon General Leonard A. Scheele of the Public Health Service, President Ned Dearborn of the National Safety Council, and President Joseph G. Norby of the American Hospital Association.

The Congress will then resolve itself into four panels—Scope and Distribution of Medical Service in Industry; Environmental Hygiene; Medical Aspects of Industrial Human Relations; and Health Education.

Three half-day sessions are available for each panel on Tuesday afternoon, January 18 and on Wednesday morning and afternoon, January 19, with a final summarizing session on the 19th. Although intended primarily for professional people, representation from labor, management, insurance and other interested groups will be invited.

**Dr. A. Kay Dawson**

Has returned to Richmond to become chief of physical medicine rehabilitation at McGuire Veterans Administration Hospital. For the past year he has been with VA's central office in Washington where he was in charge of physical medicine rehabilitation for the nation.

**Southern Surgical Association.**

At the annual meeting held at White Sulphur Springs in December, Dr. Alfred Blalock, Baltimore, was elected president, and Dr. J. M. Emmett, Clifton Forge, first vice-president.

**Dr. Robert P. Trice,**

Richmond, has been elected president of the Richmond alumni chapter of Kappa Sigma, social fraternity, for the year 1949.

**Southern Psychiatric Association.**

At the meeting of this Association in Dallas, Texas, December 6-7, Dr. Walter J. Otis, New Orleans, an alumnus of the Medical College of Virginia, succeeded to the presidency. Dr. R. Finley Gayle, Jr., Richmond, was named president-elect.

**Annual Spring Graduate Course.**

The Gill Memorial Eye, Ear and Throat Hospital, Roanoke, will present its twenty-second annual Spring Graduate Course in ophthalmology, otology, rhinology, laryngology, facio-maxillary surgery, bronchoscopy and esophagoscopy, from April 4-9, 1949.

Guest speakers include: Drs. Banks Anderson, H. W. Brown, W. B. Clark, W. B. Dearring, W. W.

XUM

Eagle, Harold Falls, E. P. Fowler, Jr., Leslie Gay, L. P. Garrod, Glen G. Gibson, C. L. Jackson, Carl C. Johnson, A. C. Jones, Harold H. Joy, Peter Kronfeld, John S. Lundy, Louis Panfique, Peter N. Pastore, Bernard Samuels, E. W. Sheldrup, Albert E. Sloane, Claire L. Straith, A. Earl Walker, Henry Williams, and Mr. L. A. Watson.

Requests for registration should be addressed to Dr. E. G. Gill, 711 South Jefferson Street, Roanoke.

### International Congress on Rheumatic Diseases.

The first International Congress on Rheumatic Diseases ever held in the United States will take place at the Waldorf Astoria in New York May 30 to June 3, 1949 inclusive. This seventh International Congress is sponsored by the International League against Rheumatism. The host is the American Rheumatism Association in cooperation with the New York Rheumatism Association.

The Congress has the official sanction of the United States Department of State which will cooperate in the issuance of official invitations. This is an open meeting. Members of the International, the European, and the Pan American Leagues against Rheumatism as well as the Canadian Rheumatism Association, British Empire Rheumatism Council, the Heberden Society of London, and the ten state or city Rheumatism Societies affiliated with the American Rheumatism Association are especially invited.

The annual American Medical Association scientific convention will be held in Atlantic City (3-4 hours from New York) during the week following the Congress (June 6 to June 10, 1949) after which a post-convention tour has been planned.

### The American Academy of General Practice

Will hold its annual scientific assembly in Cincinnati, March 7-9. This is the first annual scientific meeting and more than 2,000 doctors are expected to attend. Twenty outstanding clinical teachers, of recognized ability as speakers, will present lectures dealing with the questions that a general practitioner encounters in his daily rounds.

### Married.

Dr. James Nicholas Dudley and Miss Virginia Baird Decker, both of Roanoke, November 20th.

### Dr. A. I. Dodson,

Richmond, was an invited guest at the Post-Graduate Medical Assembly of Southwest Texas, held in Houston, December 7-9. He gave four lectures—Diagnosis of Tumors of the Kidney; Present Day Views in Treatment of Cancer of the Bladder; Management of Calculous Disease of the Kidney; and The Significance of Hematuria—and held a question and answer period on urology.

### "Lucky Junior."

Progress in medicine in the State of Michigan, and the story of progress against the diseases of childhood is the theme of a new sound motion picture "Lucky Junior" produced for the Michigan State Medical Society, by The Jam Handy Organization.

The picture stresses the importance of immunization and of the family doctor who understands and treats each of his little charges as an individual and not as just another unit of our modern system of mass production. The story is told by a kindly family doctor who reminisces, after just bringing into the world the child of the first baby he had delivered some thirty years before.

While medical science has not as yet been able to prevent rheumatic fever, our doctors are learning the best way to treat the disease so that the child recovers with the least possible damage to the young heart. With voluntary non-profit medical and hospital service plans available to everyone and with rheumatic fever control centers strategically spread throughout the state, the child born in Michigan today is indeed a Lucky Junior, which is the title appropriately selected for this motion picture. Further information regarding this film may be obtained by writing to Mr. Hugh W. Brenneman, Michigan State Medical Society, 2020 Olds Tower Building, Lansing 8, Michigan.

### Dr. Dean B. Cole,

Richmond, was recently elected president of the American College of Chest Physicians, Southern Chapter, at its meeting in Miami Beach.

### New Secretary-Treasurer.

Miss Mabel E. Montgomery, director of the nursing school and executive director of Stuart Circle Hospital, Richmond, has been named secretary-treasurer of the Virginia State Board of Nurse Examiners, succeeding the late Miss Josephine McLeod.

### Pratt Clinic.

The Fredericksburg Medical Center has been renamed the Pratt Clinic in honor of Dr. Frank C. Pratt, prominent physician of Fredericksburg for the past 40 years. He helped organize the clinic in 1936.

### Medical College of Virginia News.

Dr. Harvey Haag, Professor of Pharmacology and Dean of the Medical School, recently addressed the research staff of Smith, Kline & French Laboratories, Philadelphia, and visiting physicians. One of a regular series of research talks, Dr. Haag's report described a group of investigations which for the first time offered a quantitative measurement of irritation to mucous membranes based on edema formation. The method was developed at the Medical College of Virginia during a fifteen-year study of the irritating effect of tobacco and nicotine. Dr. J. K. Finnegan and Dr. P. S. Larson, of the Department of Pharmacology of that institution, are largely responsible for evolving the procedure.

To meet the need for more physicians, the Board of Visitors of the College have appointed a committee to study the possibility of increasing the number of students permitted to enter the School of Medicine of the college. This year only 84 students could be selected from 550 completed applications for admission. The current enrollment in the four classes of the School of Medicine of the college is 326.

Dr. W. T. Sanger, President, reported at a recent meeting of the Board of Visitors gifts totaling $58,-002.91 for November. Topping the list were two from the Navy Department, Office of Naval Research, one for $13,370.00 and the other for $19,-668.00.

Dr. Harry Gold, Professor of Clinical Pharmacology at Cornell University, School of Medicine, spoke at the College on December 14, under the sponsorship of the Phi Delta Episolon medical fraternity on the subject of "An Optional Routine for the Treatment of the Failing Heart."

### New Books.

The following are among recent books acquired by the Library of the Medical College of Virginia and are available to our readers under usual library rules:

Advances in genetics. Vol. II.
Anderson—Pathology.
Health instruction yearbook—1948.
Karpman—The alcoholic woman.
Lewis—An introduction to medical mycology.
Lief—The commonsense psychiatry of Dr. Adolph Meyer.
MacKenna—Modern trends in dermatology.
Recent advances in venereal disease. A symposium.
Robert Gould Research Foundation, Inc.—Symposia on nutrition. Vol. I.
Ryle—Natural history of disease. 2d ed.
Shepherd—Essentials of public health.
Sinai and Anderson—Emergency maternity and infant care.
Swezey—After dinner science.
Warkentin—Physician's handbook. 5th ed.
Young—The skull, sinuses and mastoids; a handbook of roentgen diagnosis.
Year book of the eye, ear, nose and throat—1948.
Year book of general medicine—1948.

### Dr. Joseph F. Phillips,

Recently at the Central State Hospital, Petersburg, is now located in Chase City.

### Dr. L. H. Alexander,

Recently of Newport News, has located for practice in Smithfield.

### Dr. Walter L. Nalls,

Who for the past year has been with the Veterans Administration at Oteen, North Carolina, has returned to Alexandria and re-opened his office at 105 North Alfred Street for the practice of internal medicine.

### Fredericksburg Hospital to Erect New Building.

The Mary Washington Hospital, Fredericksburg, has completed plans for a 100-bed modern hospital building, the main portion having five stories and a basement and an administration wing consisting of two floors and a basement. The building is expected to cost more than $1,000,000 and is to be built on land donated by the City of Fredericksburg.

### Dr. C. Howe Eller,

Richmond City Health Director, has been elected for a five-year term to the governing council of the American Public Health Association as the representative of the association's health officers section.

XUM

**American Cancer Society.**

Dr. C. C. Nesselrode, Kansas City, has recently been elected president of this Society, succeeding Dr. E. P. Lehman, University of Virginia. Dr. Lehman will continue as a director.

**The Seaboard Medical of Virginia and North Carolina Association**

Held its annual meeting in Elizabeth City, North Carolina, December 7-9, under the presidency of Dr. Zack D. Owens of that city.

New officers elected for the ensuing year are: President, Dr. Russell Buxton, Newport News; vice-presidents, Drs. F. T. Hunter, Warrenton, N. C., B. L. Parrish, Norfolk, Everett Sawyer, Elizabeth City, and W. L. Taliaferro, Norfolk; and secretary-treasurer, Dr. Clarence Porter Jones, Newport News (re-elected).

**Wanted.**

Laboratory Technician for Tucker Clinic, Williamsburg, Virginia. Good salary and living conditions. (*Adv.*)

**Wanted.**

General practitioner for North Carolina mountain resort with wide opportunities for recreation, hunting, fishing. Minimum guarantee $5400 annually with a good opportunity to increase the guarantee. Fully equipped four room office with all utilities furnished, rent free. Modern three bedroom electrically heated house, rent free. Applicants should have North Carolina license or be eligible for reciprocity. Please give full details concerning age, professional background, etc., in first reply. Address inquiries to O. A. Fetch, Resident Manager, Fontana Dam, North Carolina. (*Adv.*)

## OBITUARIES

**Dr. Andrew George Shetter,**

Well known Richmond physician, died December 13th, having been in ill health for some time. He was a native of York, Pennsylvania, and sixty-one years of age. Dr. Shetter graduated from the Medical College of Virginia in 1917. He was a Mason and a Shriner and had been a member of the Medical Society of Virginia for twenty-four years. His wife and two sons survive him.

**Dr. George Lee Smith,**

Physician and dairy farmer of Richmond, died November 22nd. He was a native of Pittsylvania County and seventy-nine years of age. Dr. Smith graduated from the College of Physicians and Surgeons, Baltimore, in 1892. He was well known throughout Virginia as a dairy farmer, having operated dairy farms in Warwick, James City and King William Counties. Dr. Smith had been a member of the Medical Society of Virginia for forty-two years and at the 1948 meeting was one of those made a Life Member for having practiced for more than fifty years. Four children survive him.

**Dr. William Armistead Gills,**

MC., USN., retired, died November 23rd at his home in Norfolk. He was seventy-two years of age and a graduate of the Medical College of Virginia in 1900. Dr. Gills was at one time professor of anatomy at the College and engaged in private practice in Richmond. He had been a resident of Norfolk since 1933. Dr. Gills was a veteran of World War I and retired from the Navy in 1923. He was formerly a member of the Medical Society of Virginia. His wife survives him.

**Dr. Russell E. Blankinship, Jr.,**

Lynchburg, died November 28th, at the age of twenty-five. He was a graduate of the Department of Medicine, University of Virginia, in the class of 1948, and was serving his internship at the Marine Hospital, Staten Island, New York, at the time of his death.